Model Railroad Administration Software

User Manual

by

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Introduction

Boomer Jack is Web-based software that helps model railroad owners administer operating sessions, and automatically generates a crew-call page so people can mark-up for those sessions.

- ✔ You can schedule or cancel sessions, and indicate when they've been held.
- ✔ Guest crews can mark-up to participate.
- ✔ BJ automatically sends e-mail to each person to confirm a mark-up or notify of a canceled session.
- ✔ You can create data for crew name tags (printed using your label-printing software, word processor, or spreadsheet).
- ✔ After a session you can record who attended, and add photos of it to your Web site.
- ✔ You can edit crew names and e-mail addresses, and see how many times each person has operated on your railroad, including the most recent date.
- ✔ You can send e-mail to crews.
- ✔ You can import and export crew names and e-mail addresses.

Software Environment

You must have a Web site to use Boomer Jack. Boomer Jack is written in the PHP programming language and uses a MySQL database to store its data. The PHP program code runs on your Web server, and sends HTML pages to Web browsers. Likewise, the MySQL database resides on your Web server. Most Web-hosting services have PHP capability and include a MySQL database "engine," so if you have a Web site, it's very likely BJ can run on it.

Boomer Jack is easily customized by editing three files (highlighted yellow in the packing list). One file contains railroad-specific text such as:

- Your name, e-mail address, and Web site URL.
- Your railroad's name.
- The dispatching system it uses (e.g., TT&TO, CTC, track warrants).
- The maximum number of crew positions at each operating session.
- The location of your session photos.
- Colors for screen buttons and forms.
- Much of the text used in e-mails.

A second file contains information needed for Boomer Jack to connect to the MySQL database, and a third file contains several "flags" that control how Boomer Jack operates. These files are explained in detail later.

User manual organization

Chapter 1 deals with configuring and installing Boomer Jack. You might want to read Chapter 2 first to get a sense of how Boomer Jack operates, then come back to Chapter 1. Be sure to read Chapter 3 to learn how to integrate the crew-call and session photos pages into your Web site.

Packing list

Boomer Jack consists of these files. Check to be sure all files are present after unzipping them, as instructed in the next chapter. Also use this list when uploading files to your Web site, to check that all are there as well. Not listed here are the backup files with names starting with orig_

✔	File	Purpose
❑	create_my_rr.sql	Creates the MySQL database used by Boomer Jack.
❑	bj_admin_create_sessions.php	Create operating sessions.
❑	bj_admin_crews.php	View and update crew information.
❑	bj_admin_delete_all_crews.php	Delete all crews from the database.
❑	bj_admin_email_crews.php	Send e-mail to crews.
❑	bj_admin_export_crews.php	Export crew names to other software.
❑	bj_admin_import_crews.php	Import crew names from other software.
❑	bj_admin_job_assignments.php	Assign jobs to crews for an operating session
❑	bj_admin_jobs.php	Modify the job-preference list that appears on the crew-call page.
❑	bj_admin_login.php	Login page for administration functions.
❑	bj_admin_name tags.php	Create data for making crew name tags. *Note: This page does **not** create the actual name tags. Other software is needed for that.*
❑	bj_admin_photos.php	Add photos to your Web site's session photos page.
❑	bj_admin_sessions.php	Mark sessions held, record crew attendance, or cancel/restore sessions.
❑	bj_admin_test_e-mail.php	Send yourself a test e-mail.
❑	bj_admin_test_web.php	Display a test page combining HTML with Boomer Jack output.
❑	bj_admin.php	Main screen for administration functions.
❑	bj_constants.php	Constants used throughout the application.
❑	bj_crew_call.php	Displays calendars on your Web site with operating session dates highlighted, and allows guests to mark-up.
❑	bj_flags.php	Runtime configuration flags.
❑	bj_functions.php	Functions used throughout the application.
❑	bj_ops_photos.php	Displays operating session photos on your Web site.
❑	bj_test_template.php	Example HTML template for integrating BJ into a Web site.
❑	bj_user_info.php	Contains the database name, and user name and password.
❑	bj_no_entry.jpg	Bar-circle image used on calendars for canceled sessions

1 Installation

Boomer Jack consists of PHP program files that must be uploaded to your Web site, and a MySQL database that must be created on your Web-hosting service's server. Uploading the PHP files is straightforward, but configuring Boomer Jack and creating the MySQL database is a bit more involved. This chapter describes the process for these tasks, and provides space for you to write your choice where a decision is required.

1.1. Configuring and installing Boomer Jack

To begin, create an empty directory on your computer's hard drive and unzip the Boomer Jack files into it. Two new directories will be created here, one named *Program Files* and the other named *User Manual.* You will edit several files in the *Program Files* directory to configure Boomer Jack, then upload the files to your Web server. *All* files named with a **bj_** prefix must be uploaded to your Web server; the **bj_** prefix makes the files easy to identify there. Most of the files are PHP files, but there also is an image whose filename ends in **.jpg**.

1.1.1. Choosing the Boomer Jack location

Decide which one of two locations on your Web server will hold the Boomer Jack files:

- With your regular Web site HTML files (strongly recommended).
- In a directory dedicated to the Boomer Jack application.

Surprisingly, the best location is along with your regular HTML files. It might seem better to put all Boomer Jack files in their own directory, but this complicates integrating the crew-call and operating session photo pages with your regular Web site.

When you see the term "Boomer Jack directory" or "BJ directory" in this manual, you should interpret that as the location you choose in step 1 below.

Boomer Jack needs to know where you will store your operating session photos. This could be the same directory as you store your other Web site images or it could be a special directory for ops session photos only. A separate directory is the best choice, because it speeds loading Boomer Jack's Photos Administration page where you add photos after a session. Mixing the session photos with the regular Web site photos can result in many photos being loaded as the page opens, a time-consuming process. By default, Boomer Jack assumes session photos will be placed in the **ops_photos** directory beneath your HTML directory. If you choose a different name or location, you must modify a PHP file to tell Boomer Jack where it is.

Make your server location decisions and record them here.

	Result
Step 1. ❑ Decide whether to put the PHP files in a special directory (e.g., BJ) beneath your regular HTML files (recommended) or along with the HTML files. This is known as "the Boomer Jack directory."	The Boomer Jack directory:
Step 2. ❑ Choose a name for the directory where your operating	Ops session photos directory:

session photos will be stored, and decide where it will be located . The default photos directory name is **ops_photos**, but choose a different name if you wish. Create this directory on your Web server if it doesn't already exist. See step 1 in the next section for more information on this topic.	

1.1.2. Configuring basic information

Several of Boomer Jack's files contain information that is intended to be customized for your specific model railroad and Web site. To do this, you will open these files in a text editor such as Notepad, make the changes, save the revised files to disk, and ultimately upload them to your Web site server.

Important: Boomer Jack comes with copies of all files so you can refer to an original if something doesn't work after you make a change. These files are named the same as the regular program files, but begin with **"orig_"** ("original"). *Do not modify these files.* Keep them on your computer's hard drive in the in the *Program Files* directory that was created where you unzipped the Boomer Jack files in section 1.1 above. You could upload them to your Web site for safekeeping if you wish; Boomer Jack will never attempt to open or modify any of them.

To begin the configuration, open the *bj_constants.php* file in a text editor and make these changes, then save the file to disk. When done, upload *bj_constants.php* to the Boomer Jack directory on your Web server. Be sure to record the customizations here for future reference. Only steps 1 and 2 are required, but look over the remaining steps and make any changes you wish. If the value contains quotation marks ("), change only the text *inside* the quotation marks. Do not delete the quotation marks, and be sure to leave the semicolon (;) at the end of each line.

Here are examples of how to edit these values. Notice the quotation marks in the first line; the second has no quotation marks. Note the semicolon that must remain at the end of both lines.

$MY_RR = "Generic Railroad";** ☞ **$MY_RR = "Eastern & Western Railway";

$SIMULATE_EMAIL = true;** ☞ **$SIMULATE_EMAIL = false;

	Result
Step 1. ❑ Locate the **$MY_OPS_PHOTOS_DIR** constant. This specifies the path to the directory where you will upload your operating session photos to be displayed on your Web site. The default value of "./ops_photos" means that Boomer Jack will look for a directory named ops_photos beneath your HTML directory. If you copied the BJ files to a separate directory beneath your HTML directory, substitute *two* periods for the single period, for example, " .. /ops_photos" .	**$MY_OPS_PHOTOS_DIR** value is:
Step 2. Further customize Boomer Jacked by setting values for these constants: ❑ Change **$MY_RR** from "Generic Railroad" to your railroad's name.	**$MY_RR** changed to:

❑ Change **$MY_RR_SHORT** from "GEN RR" to your railroad's short name or abbreviation (e.g., PRR, B&O RR, SOU). It's your choice whether to include "RR" or "RY."	**$MY_RR_SHORT** changed to:
❑ Change **$MY_NAME** from "My Name" to your first and last name.	**$MY_NAME** changed to:
❑ Change **$MY_NAME_SHORT** from "Me" to your first name.	**$MY_NAME_SHORT** changed to:
❑ Change **$MY_EMAIL** from "me@myDomain.com" to your own e-mail address.	**$MY_EMAIL** changed to:
❑ Change **$MY_WEB_URL** from "http://myRR.myDomain.com" to the URL of your Web site.	**$MY_WEB_URL** changed to:
❑ Change **$MY_SESSION_PHOTOS_URL** to include the Web URL to bj_ops_photos.php . The default "$MY_WEB_URL/bj_ops_photos.php" is correct if you placed BJ's files in the same directory as your regular HTML files. But if you created a separate BJ directory beneath this directory, precede the path with /BJ: "$MY_WEB_URL/BJ/bj_ops_photos.php" .	**$MY_SESSION_PHOTOS_URL** set to:
❑ Change **$MY_CREW_CALL_URL** to include the Web URL to bj_crew_call.php . The default value "$MY_WEB_URL/bj_crew_call.php" is correct if you placed BJ's files in the same directory as your regular HTML files. But if you created a separate BJ directory beneath this directory, precede the path with /BJ: "$MY_WEB_URL/BJ/bj_crew_call.php" .	**$MY_CREW_CALL_URL** set to:
❑ Change **$MY_MAX_SESSION_SLOTS** from 5 to the maximum number of people (including yourself) you want at an operating session. Count extra board positions if you have an extra board. When this number of people have marked-up, Boomer Jack marks the session "filled" and does not allow additional mark-ups. You, the owner, are automatically marked-up when you create sessions.	**$MY_MAX_SESSION_SLOTS** set to:
❑ Change **$MY_DISPATCHING_SYSYEM** from "Timetable & Train Order" to the dispatching system your railroad uses. Examples: CTC, Track Warrant, "Simon says, Check-Box. Abbreviate or spell-out at your discretion (e.g., Timetable & Train Order or TT&TO).	**$MY_DISPATCHING_SYSYEM** set to:
***Step 3** (Optional)*	❑ **$MARKUP_CONFIRM** changed.

❑ Locate **$MARKUP_CONFIRM** and read the associated text. This text appears in the e-mail sent to people who mark-up for operating sessions. Change it if you wish.	
Step 4 (Optional) ❑ *Locate* $SCRATCH_CONFIRM_1 *and* $SCRATCH_CONFIRM_2 *, and read the associated text. This text appears in the e-mail sent to people who "mark-off" (remove themselves from) operating sessions.*	❑ **$SCRATCH_CONFIRM_1** changed. ❑ **$SCRATCH_CONFIRM_2** changed.
Step 5 (Optional) ❑ Locate **$TRY_ACCOMMODATE_PREFS** and read the associated text. This text appears in the e-mail sent to people who express a preference for a particular job when marking-up for operating sessions. Change it if you wish.	❑ **$TRY_ACCOMMODATE_PREFS** changed.
***Step 6** (Optional)* ❑ Locate **$SESSION_CANCELED** and read the associated text. This text appears in the e-mail sent to everyone who is marked-up for a session that you later cancel. Change it if you wish.	❑ **$SESSION_CANCELED** changed.
***Step 7** (Optional)* ❑ Locate **$SESSION_RESTORED** and read the associated text. This text appears in the e-mail sent to everyone who is marked-up for a session that you had canceled but later restore. Change it if you wish.	❑ **$SESSION_RESTORED** changed.
Step 8 (Optional) ❑ Locate **$NEWBIE_REMINDER** and read the associated text. This text appears in the e-mail sent to people who check the *"I am new to the railroad, but I will study the Web site to become familiar with it"* checkbox when marking-up for operating sessions, to remind them to do exactly that. Change it if you wish.	❑ **$NEWBIE_REMINDER** changed.
Step 9 (Optional) ❑ Locate **$ALREADY_SIGNED** and read the associated text. This text appears in the e-mail sent to people who mark-up for an operating session but were already marked-up for that session. Change it if you wish.	❑ **$ALREADY_SIGNED** changed.
***Step 10** (Optional)* ❑ Locate **$DRIVING_DIRECTIONS** and read the associated text. This text appears in the e-mail sent to people who check the *"I need driving directions"* checkbox when marking-up for operating sessions. You almost certainly will want to change this from the default text which says, *"Drive*	❑ $DRIVING DIRECTIONS *changed.*

around until you see my house."	
Step 11 (Optional) ❑ Set **$APP_NAME_ON_PAGE** to **true** if you want Boomer Jack's name to appear at the top of every administration screen, or to **false** if not. The name consumes considerable space, so everything else on the page is pushed downward.	❑ $APP_NAME_ON_PAGE *set to:*

1.1.3. Customizing Boomer Jack's behavior.

"Flags" are "switches" that tell Boomer Jack how to behave in certain situations. Open the *bj_flags.php* file in a text editor and locate the specified constants. Make changes if needed, then save the file to disk. Be sure to record the customizations for future reference.

	Result
Step 1 ❑ **$PUBLIC.** Set this to **true** if Boomer Jack is running on your public Web server, or to **false** if you're using BJ on a local private server, e.g., for testing. ***Important!*** *If you have a private server and set this to false, be sure to also edit* bj_user_info.php. *There you will see these four lines:* **if ($PUBLIC)** **$HOST = "myAcct.myWebHost.com";** **else** **$HOST = "private_server";** *The first **$HOST** value is set in Chapter 2. Set the value of the second **$HOST** to the name of your private server.*	**$PUBLIC** set to:
❑ **$SIMULATE_EMAIL.** Leave this set to **true** to tell Boomer Jack to display simulated e-mail in the Web browser instead of actually sending it. Set it to **false** to send real e-mail. Boomer Jack sends e-mail when people mark-up for sessions, when you cancel or restore sessions, and when when you send e-mail to crews or send a test e-mail to yourself in the Administration screen. This flag is extremely helpful for testing, and you are encouraged to leave it set to **true** until testing is complete; see section 2.11 .	**$SIMULATE_EMAIL** set to:
❑ **$TESTING.** Leave this set to **false** for normal operation. Set it to **true** only if you want the crew-call page to display a message telling people they aren't really marking-up for actual operating sessions. Again, this flag can be useful for testing.	**$TESTING** set to:

1.1.4. Uploading the Boomer Jack files to Your Web server

After editing the files as described above, use your regular file-upload software such as FTP to

upload all files whose names begin with "**bj_**" except *create_my_rr.sql* from the *Program Files* directory where you unpacked the Boomer Jack files to the Boomer Jack directory on your Web server. As mentioned in section 1.1.2, you also might want to upload the original files whose names begin with "**orig_**" to your Web site for safekeeping.

Do not upload *create_my_rr.sql,* because it will be executed from your hard drive in the next section.

1.2. Creating the MySQL database

You might need help from your Web-hosting service to set up the MySQL database, since some of the steps can not be accomplished on a remote server by running scripts. Usually Web-hosting folks are very helpful, and often the online instructions are sufficient. Here are the steps you will perform:

- Create the database (the "schema").
- Create an administrator ID and password for you to log into the database.
- Create a user ID and password for Boomer Jack to log into the database.
- Create the database tables.
- Determine the host name needed for Boomer Jack to connect to the database.

Boomer Jack comes configured to use a database named **my_rr** , which you'll probably want to change to reflect the name of your railroad (recommended but not required. Follow these steps to create and initialize your database.

1.2.1. Initial setup

	Result
Step 1. ❑ The default database name is **my_rr.** Choose a different name if desired. Use only letters, numbers, and underscores in the name. The name is case-sensitive, so write it accurately in the next column.	Database name:
Step 2. ❑ Log into your Web-hosting service's administrator control panel and navigate to the page where you can manage MySQL databases.	
Step 3. ❑ Look for an icon or button that allows you to create a new database. Do this and name it with the name you chose instep 1.	
Step 4. ❑ Look for an icon or button that allows you to create a new user. Create an administrator user name and password for yourself. These are case-sensitive, so write them accurately in the next column. You will be the only one logging-in with this user name.	Administrator user name: Administrator password: Administrator rights:

By default, this user probably will be granted all privileges. If not, do this yourself using features on the MySQL administration screen.	
Step 5. ❑ Create a user name (suggestions: **bj_user**, **bj_rr**, **boomer_jack**) and password for Boomer Jack to log into the database). Grant only SELECT, INSERT, UPDATE, and DELETE privileges to this user. These are case-sensitive, so write them accurately in the next column.	Boomer Jack user name: Boomer Jack user password: Boomer Jack user privileges:
Step 6. ❑ Log out of your Web-hosting service's administrator control panel. You will log in again to create the database tables in section 1.2.3 .	

1.2.2. Customizing the database-creation script and database connection information

The file *create_my_rr.sql* is a MySQL script that creates the database tables. The file *bj_user_info.php* contains information needed for Boomer Jack to connect to the database. Open these files in a text editor and make the changes listed here, then save the files to disk.

	Result
Step 1. (create_my_rr.sql) ❑ Find the line in *create_my_rr.sql* that reads `USE my_rr` and replace **my_rr** with the name of the database you created in step 1 of section 1.1.2 . The name is case-sensitive. There may be other instances of **my_rr** in the file. but these are comments if they occur on a line that begins with two dashes. You may replace **my_rr** in these comment lines if you wish, but doing so only makes the file easier to read and understand. Leaving the original **my_rr** in the comments does not affect anything.	Changed **my_rr** to:
Step 2. (*bj_user_info.php*) Open the file *bj_user_info.php* in a text editor and make these changes: ❑ Change $**DATABASE** from "my_rr" to the database name you chose in step 1 of section 1.1.2 . ❑ Change **$USER_NAME** from "myrruser" to the Boomer Jack user name you created in section 1.2.1. ❑ Change **$PASSWORD** from "my44pswd" to the Boomer Jack user password you created in section 1.2.1.	*Record the values you choose. You will need them in section 1.2.3 .* **$DATABASE** changed to: **$USER_NAME** changed to: **$PASSWORD** changed to: **$ADMIN_NAME** changed to:

❑ Change **$ADMIN_NAME** from "rr_owner" to *something else. This is the name you'll use to log into Boomer Jack's administration screens. It is not the same administrator name you created for the database in step 4 of section 1.2.1 .* ❑ Change **$ADMIN_PASSWORD** from "1234567" to *something else. This is the password you'll use to log into Boomer Jack's administration screens. It is not the same administrator password you created for the database in step 4 of section 1.2.1 .*	**$ADMIN_PASSWORD** changed to:
Step 3. (*bj_user_info.php*) ❑ After modifying the file *bj_user_info.php* in step 3, upload it to the Boomer Jack directory on your Web site server as explained in section 1.1.4.	

1.2.3 . Creating the database tables

A database stores data in "tables." To create these tables, you execute the *create_my_rr.sql* script from your local hard drive while logged intoyour Web-hosting service's MySQL administration screen.

	Result
Step 1. ❑ Log into your Web-hosting service's administrator control panel and navigate to the page where you can manage MySQL databases, as you did earlier in section 1.2.1 .	
Step 2. ❑ Locate the screen, tab, or button that allows you to execute a SQL script. This might be labeled "Import" or "SQL ." It should have a Browse button that brings up a dialog where you can select a file on your computer's hard drive to open. Navigate to the Boomer Jack directory and select the *create_my_rr.sql* file. When the file-open dialog closes, find and click the **Execute** or **Run** button to run the script on the hosting-service's server. After a few seconds you should see a message reporting the result.	
Step 3. ❑ If the *create_my_rr.sql* script ran without error, locate the button or link that allows you to look at the database structure. You should see these tables: • crews • logins • misc	❑ Tables exist

• photos • jobs • sessions • sessions_crews_rel The MySQL administration page should offer a way to inspect data in a table. Look at the **jobs** table and you should see the job names discussed in step 2 of section 1.2.2 .	❑ Job names are correct

Step 4.
❑ Search your Web-hosting service's MySQL administration screens for information on how a Web application can connect to your database. A **Generate Code** button will do the trick. Here is an example of PHP code with the key part highlighted; ignore the non-highlighted text.
`<?php`
`$link =`
`mysql_connect('domain.Webhostmysql.com', '`
`user ', ' ******** ');`
`[...]`
`mysql_select_db (my_rr);`
`?>`
 	
❑ Open the *bj_user_info.php* file in a text editor. Copy the *text inside the single quotes in the highlighted field of the generated code (i.e., the highlighted text that appears on the line that begins with* **mysql_connect** *, and paste it into the value* for **$HOST** in *bj_user_info.php.* Copy *only the text in the $HOST value; do not include the single quotes from the generated code. Paste the copied text inside the existing quotation marks following* $HOST.
 	
❑ *Upload bj_user_info.php to the Boomer Jack directory on your Web server.*
	$HOST = "myAcct.myWebHost.com";
	
	changed to:
	
	$HOST = "_____";

Step 5. ❑ You have successfully created the Boomer Jack database. Log out of the MySQL administrator control panel.	

1.3. Initial testing

Finally we are ready to see Boomer Jack in action. This involves opening the main Administration screen to verify that Boomer Jack can connect to the database and that you can log into Boomer Jack. Before starting this step, be sure you've uploaded all of the Boomer Jack files to your Web server as described in section 1.1.4, and that you've created the database as described above.

If you receive an error message during this initial test, read Chapter 4 for help.

Perform the following steps to test Boomer Jack.

	Result
Step 1. ❑ Open a Web browser and type your Web site's URL into the address bar followed by /bj_admin.php" (assuming you uploaded the BJ files to the directory with your regular HTML files). For example, the full URL would resemble myRR.myDomain.com /bj_admin.php but you'd substitute your Web site's name and domain for the highlighted text.	
Step 2. ❑ Boomer Jack's administrator login screen should appear, asking you for the administrator name and password. Check that the name of your railroad appears on the second line of this screen. Type the name and password you set for **$ADMIN_NAME** and **$ADMIN_PASSWORD** in step 3 of section 1.2.2.	Administrator name: Administrator password:
Step 3. ❑ If you entered the password correctly, you should next see Boomer Jack's Crew and Session Administration screen (Figure 2.1). Check that the name of your railroad appears on the second line of the screen.	❑ OK
Step 4. ❑ The Crew and Session Administration screen should contain a column of blue buttons on the left with a red Log Out button at the bottom. Do not click any of the buttons (including the Log Out button) yet.	❑ OK
Step 5. ❑ Navigate to some other page in your Web browser. Next re-type the BJ administration URL in the browser's address bar (e.g., myRR.myDomain.com/bj_admin.php). This should return you directly to the Crew and Session Administration screen without entering a password. But if you wait more than 15 minutes (or click the **Log Out** button) then type this URL again, you'll go to the login screen. Read section 2.3 for more information on this.	❑ It works!

Congratulations! Boomer Jack is operating correctly. This simple test confirms that your Web server is connecting to the MySQL database and executing the PHP files properly. Next we'll explore Boomer Jacks features in detail.

2 Using Boomer Jack

2.1. Overview

Boomer Jack is designed to make your life easier through this Session and Crew Administration screen. The only public access to Boomer Jack is the crew-call page where people mark-up for operating sessions (Figure 3.1) and the page that displays operating session photos(Figure 3.5).

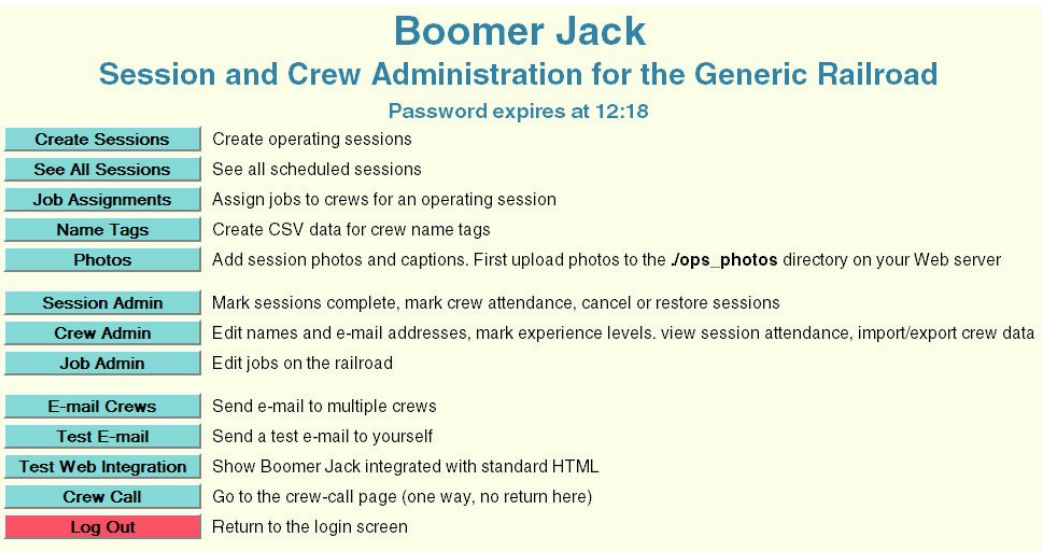

Boomer Jack
Session and Crew Administration for the Generic Railroad
Password expires at 12:18
Create Sessions
Create operating sessions
See All Sessions
See all scheduled sessions
Job Assignments
Assign jobs to crews for an operating session
Name Tags
Create CSV data for crew name tags
Photos
Add session photos and captions. First upload photos to the /ops_photos directory on your Web server
Session Admin
Mark sessions complete, mark crew attendance, cancel or restore sessions
Crew Admin
Edit names and e-mail addresses, mark experience levels. view session attendance, import/export crew data
Job Admin
Edit jobs on the railroad
E-mail Crews
Send e-mail to multiple crews
Test E-mail
Send a test e-mail to yourself
Test Web Integration
Show Boomer Jack integrated with standard HTML
Crew Call
Go to the crew-call page (one way, no return here)
Log Out
Return to the login screen

Figure 2.1: Main Administration screen

Here is what you can do from the main Administration screen:

- Create operating sessions, specifying the date, starting time, and permitted arrival time. Multiple sessions a be created on the "nth" day of each month (e.g., first Saturday, third Thursday, etc.).
- See a list of all scheduled sessions.
- Assign jobs to crews coming to an operating session.
- Create data for crew name tags at operating sessions. You need label-printing software or a spreadsheet to print the tags; Boomer Jack does not do this.
- Add operating session photos and captions that will appear automatically on your Web site.
- Mark sessions as held, and cancel or restore sessions. Mark crew attendance at sessions. Boomer Jack sends e-mail to crews who are marked-up for these sessions. See section 2.5 for details.
- *Edit crew names, e-mail addresses, and view crew attendance at past operating sessions. You can also import and export crew data.*
- *Customize the jobs on your railroad.*
- *Send e-mail to multiple crews at once.*
- Send a test e-mail to yourself.
- Demonstrate and test Boomer Jack integration with standard HTML, so you can tailor the crew-

call and ops sessions pages to match your Web site.

- Go to the crew-call page directly, without typing its URL into the Web browser.

2.3. A note about security

Boomer Jack checks for a valid administrator password every time you open one of the administration screens. If a password is needed, you must type type the password assigned to **$ADMIN_PASSWORD** in section 1.2.2 , step 3. It doesn't matter which admin operation you request, you get the administrator login screen if a password is needed.

Once you type the correct password, it's good for 15 minutes on any one screen. This means you must move from one administration screen to another within 15 minutes or you will have to enter the password again.

Each time you open any admin screen, the password timer is set to 15 minutes, and you have that long to complete your work on that screen and move to a different one. Under normal operation, this should be sufficient time (a shorter time provides better security; see below) so you won't be asked for the password again. But if you walk away and come back 16 minutes later, you *will* be asked when you open another screen.

This security scheme, where *all* admin pages check the password, prevents someone from from modifying your database if they happen to guess or stumble onto one of Boomer Jack's administration pages, starting from the crew-call or session photos URLs. It doesn't take much imagination to look at the crew-call URL **http://myRR.myDomain.com/bj_crew_call.php** and think, "let's see what happens if I substitute **bj_admin** for **bj_crew_call**."

Remember the 15-minute window as you explore Boomer Jack's features. If the password expires and you get the login screen, just enter the password again and click the desired button when you reach the main Administration screen (Figure 2.1) . As can be seen in that figure, Boomer Jack displays on each screen the time the password expires.

You can change the 15-minute password window by assigning a new the value to **$PASSWORD_TIMEOUT** in the *bj_constants.php* file. A shorter time affords better security since anyone typing the URL of an admin page while the window is open has access to all administrator functions until the time expires.

There is no penalty for a short password expiration. The password timer is reset each time you click a button on a screen. So even if you're working in the same general area (e.g., creating sessions) the timer is reset when you see the screen that displays all the sessions.

You can click the **Log Out** button on the main Administration screen to immediately expire the password time and go to the administrator login screen.

2.4. A Note about session numbers

Boomer Jack sequentially numbers all complete operating sessions. This means that every time you mark a session "held," all completed sessions are renumbered starting with 1. Likewise, if you mark a "held" session as "not held," all the completed sessions are again renumbered. This gives you an automatic and accurate count of the operating sessions that have been held on your railroad. Session numbers appear on the Session Administration screen, on the summary list of scheduled sessions, and in the e-mail sent to crews after a session has been held.

2.5. Creating operating sessions

Boomer Jack needs operating sessions before it can do anything. Without sessions, your crew-call page is empty, so there is no way for crews to mark-up and add their names to the database.

So the first order of business is to create some operating sessions. Click the **Create Sessions** button on the main Administration screen (Figure 2.1) and you should see this screen:

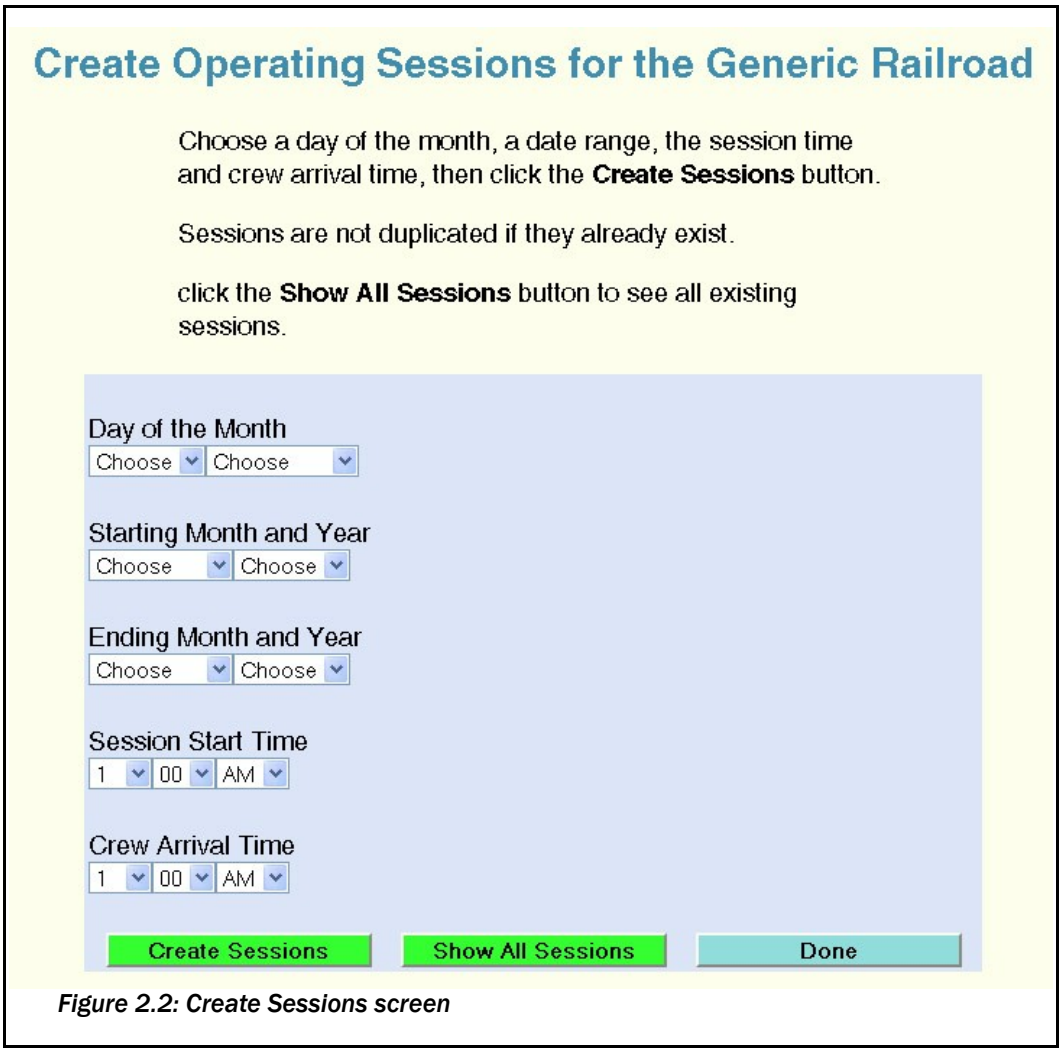


Figure 2.2: Create Sessions screen

You may create a single session or multiple sessions. Make your selections from the drop-down lists. First choose the day of the month, such as the first Saturday or the third Thursday. Next choose the starting month and year, and the ending month and year. If you want to create only a single session, choose the same month and year for both. Choose the session start time and the earliest time you want crews to arrive. Both times appear on the crew-call page and in the confirmation e-mail sent to each person who marks-up.

Click the **Create Sessions** button to create sessions for the specified dates. When complete, you'll see the session summary shown in Figure 2.3. If the summary doesn't show the sessions you intended to create, you probably selected incorrectly from the drop-down lists (for example, one of the lists was left at "Choose" or the starting date was later than the ending date).

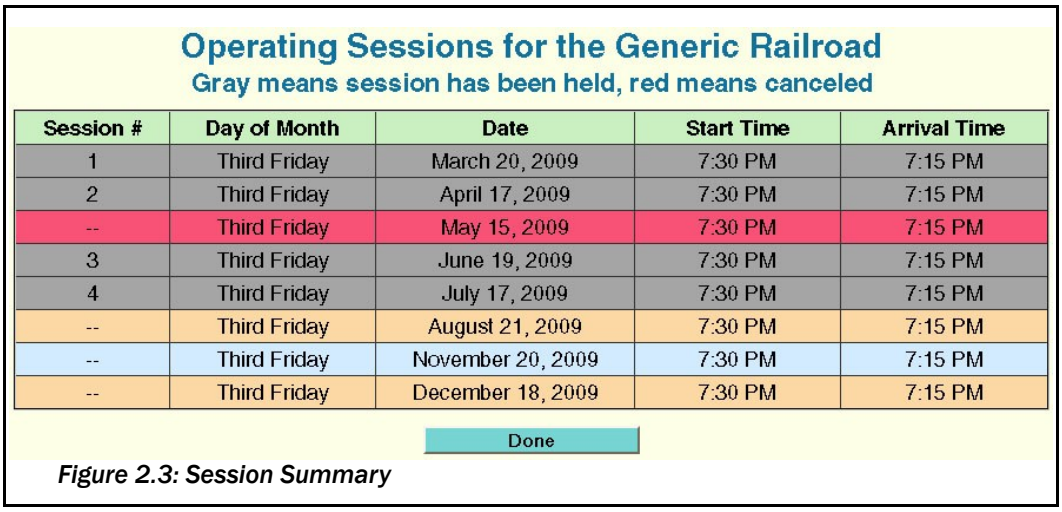
If you attempt to create sessions that already exist, Boomer Jack updates the starting and arrival times for those sessions *if no crews have marked-up for them.* Existing sessions are not updated if crews have marked-up. This ensures that no one who marked-up for a session is unaware of a time

change. The *only* way to change a session time with marked-up crews is to cancel and then restore the session (sections 2.5.2 and 2.5.3). Both actions notify crews, and restoring a session clears the call board, so crews must mark-up again.

To view a summary of all sessions, click the **Show All Sessions** button *before* you make your selections to create sessions (if you make your selections first, then click the button and return, your selections will be gone). You'll see the session summary shown in Figure 2.3, which you also can open directly from the main Administration screen, as described in the next section.

2.4. Viewing all operating sessions

Click the **All Sessions** button on the main Administration screen (Figure 2.1) to see a list of all operating sessions that have been scheduled. As shown below, sessions which have been held are shown with a gray background and have session numbers, while pending sessions are shown with alternating blue and tan backgrounds, and have no session numbers. Canceled sessions are highlighted in red. Notice that only completed sessions have numbers.



Operating Sessions for the Generic Railroad

Gray means session has been held, red means canceled

Session #	Day of Month	Date	Start Time	Arrival Time
1	Third Friday	March 20, 2009	7:30 PM	7:15 PM
2	Third Friday	April 17, 2009	7:30 PM	7:15 PM
--	Third Friday	May 15, 2009	7:30 PM	7:15 PM
3	Third Friday	June 19, 2009	7:30 PM	7:15 PM
4	Third Friday	July 17, 2009	7:30 PM	7:15 PM
--	Third Friday	August 21, 2009	7:30 PM	7:15 PM
--	Third Friday	November 20, 2009	7:30 PM	7:15 PM
--	Third Friday	December 18, 2009	7:30 PM	7:15 PM

Done

Figure 2.3: Session Summary

2.4. Checking-out Boomer Jack

Now is a good time to populate the database with some test data so you can completely check out Boomer Jack. You do this on the crew-call page, but read section 2.4.1 before you start. You can reach the crew-call page by entering the URL into your Web browser or by clicking the **Crew Call** button on the main Administration screen. The crew-call URL is the one you set for **$MY_CREW_CALL_URL** in step 2 of section 1.1.2.

The crew-call page can be customized to match your individual Web site (see Chapter 3), but the essentials are shown in the next two figures.

The **$MY_CALENDARS_PER_ROW** constant in *bj_constants.php* tells Boomer Jack how many calendars to put on one row on this page and also on the Session Administration screen (section 2.5). The default value is 2, but change it as desired. Be careful displaying more than two calendars per row because the browser can wrap names and job preferences in the list of marked-up crews. to the right of the calendar.

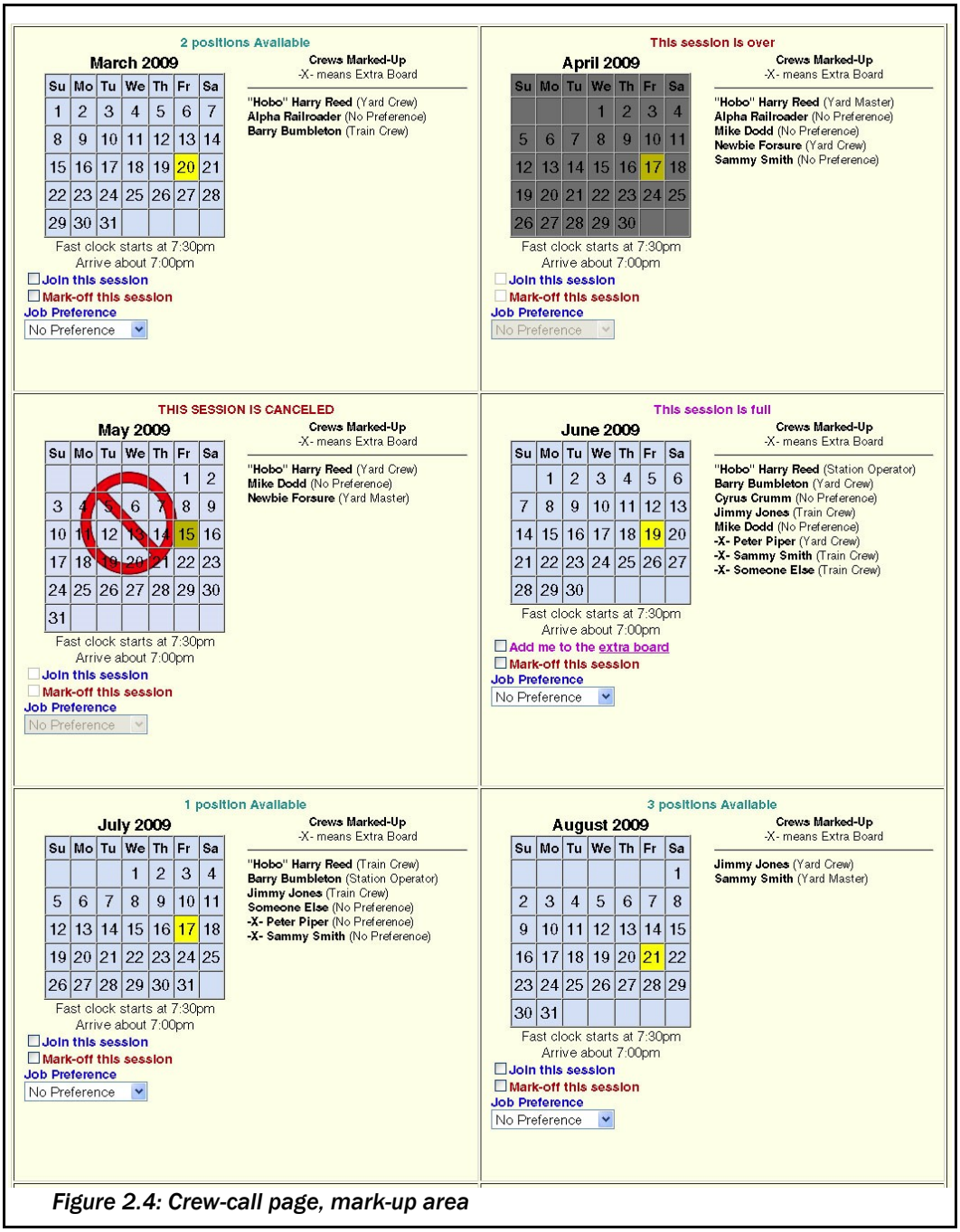

2 positions Available
March 2009
Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31
Crews Marked-Up
-X- means Extra Board
"Hobo" Harry Reed (Yard Crew)
Alpha Railroader (No Preference)
Barry Bumbleton (Train Crew)
Fast clock starts at 7:30pm
Arrive about 7:00pm
Join this session
Mark-off this session
Job Preference
No Preference
This session is over
April 2009
Su Mo Tu We Th Fr Sa
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30
Crews Marked-Up
-X- means Extra Board
"Hobo" Harry Reed (Yard Master)
Alpha Railroader (No Preference)
Mike Dodd (No Preference)
Newbie Forsure (Yard Crew)
Sammy Smith (No Preference)
Fast clock starts at 7:30pm
Arrive about 7:00pm
Join this session
Mark-off this session
Job Preference
No Preference
THIS SESSION IS CANCELED
May 2009
Su Mo Tu We Th Fr Sa
1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
Crews Marked-Up
-X- means Extra Board
"Hobo" Harry Reed (Yard Crew)
Mike Dodd (No Preference)
Newbie Forsure (Yard Master)
Fast clock starts at 7:30pm
Arrive about 7:00pm
Join this session
Mark-off this session
Job Preference
No Preference
This session is full
June 2009
Su Mo Tu We Th Fr Sa
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Crews Marked-Up
-X- means Extra Board
"Hobo" Harry Reed (Station Operator)
Barry Bumbleton (Yard Crew)
Cyrus Crumm (No Preference)
Jimmy Jones (Train Crew)
Mike Dodd (No Preference)
-X- Peter Piper (Yard Crew)
-X- Sammy Smith (Train Crew)
-X- Someone Else (Train Crew)
Fast clock starts at 7:30pm
Arrive about 7:00pm
Add me to the extra board
Mark-off this session
Job Preference
No Preference
1 position Available
July 2009
Su Mo Tu We Th Fr Sa
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31
Crews Marked-Up
-X- means Extra Board
"Hobo" Harry Reed (Train Crew)
Barry Bumbleton (Station Operator)
Jimmy Jones (Train Crew)
Someone Else (No Preference)
-X- Peter Piper (No Preference)
-X- Sammy Smith (No Preference)
Fast clock starts at 7:30pm
Arrive about 7:00pm
Join this session
Mark-off this session
Job Preference
No Preference
3 positions Available
August 2009
Su Mo Tu We Th Fr Sa
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
Crews Marked-Up
-X- means Extra Board
Jimmy Jones (Yard Crew)
Sammy Smith (Yard Master)
Fast clock starts at 7:30pm
Arrive about 7:00pm
Join this session
Mark-off this session
Job Preference
No Preference

Figure 2.4: Crew-call page, mark-up area

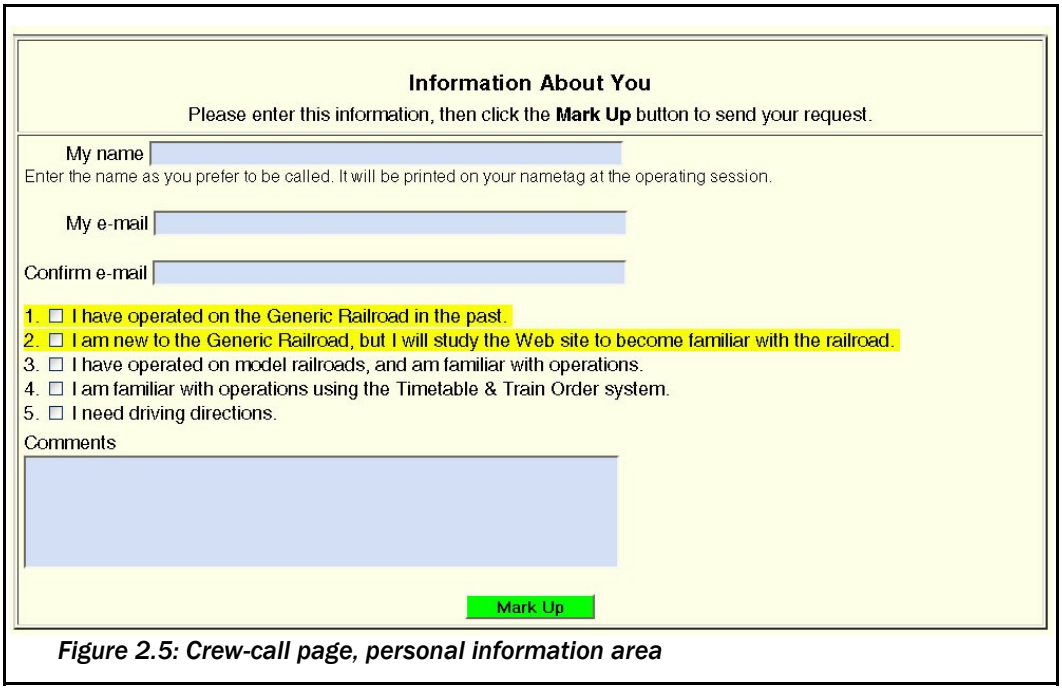

Information About You
Please enter this information, then click the Mark Up button to send your request.
My name
Enter the name as you prefer to be called. It will be printed on your nametag at the operating session.
My e-mail
Confirm e-mail
1. ☐ I have operated on the Generic Railroad in the past.
2. ☐ I am new to the Generic Railroad, but I will study the Web site to become familiar with the railroad.
3. ☐ I have operated on model railroads, and am familiar with operations.
4. ☐ I am familiar with operations using the Timetable & Train Order system.
5. ☐ I need driving directions.
Comments
Mark Up

Figure 2.5: Crew-call page, personal information area

2.4.1. How to create test crews

It's a good idea to test Boomer Jack with made-up crew names and e-mail addresses, but it's also important to do this right. Before you start, open the *bj_flags.php* file in a text editor and set the value of **$SIMULATE_EMAIL** to **true** , then upload this file to the Boomer Jack directory on your Web site. This forces Boomer Jack to display *simulated* e-mail on the screen instead of sending actual e-mail to your made-up addresses.

Important! When inventing crew names and e-mail addresses, do *not* use your own e-mail address or the same made-up e-mail address for every crew name. Each time someone marks-up, Boomer Jack checks the entered name and e-mail address against the database. If either the name or the e-mail address matches what was entered, Boomer Jack updates the database. So if you enter John Jones with an e-mail address of **me@mydomain.com** and later enter Sammy Smith and other names with the same **me@mydomain.com**, Boomer Jack will find the record with that e-address and change the name each time, resulting in only one name in the database.

Also, remember that creating made-up crew names "pollutes" your database with bogus data. When you've finished testing and are ready to go live, you should again run the *bj_c create_my_rr.sql* script as you did in section 1.2.3 . This deletes all database tables and the test data they contain, and creates empty tables in their place.

2.4.2. Marking-up on the crew-call page

This section and section 2.4.3 below describe how the crew-call page works, which hopefully should be self-evident, since this is where people sign-up for your operating sessions. It also explains what happens behind the scenes when crews mark-up. As you read through this section, go ahead and mark-up for some sessions using your test crew names and e-mail addresses.

The crew mark-up area (Figure 2.4) displays a calendar for each operating session, with the session date highlighted in yellow. Calendars for completed sessions are shaded gray, and those for canceled

sessions include a red "no entry" symbol. The number of positions remaining appears above the calendar.

To the right of each calendar is a list of people already marked-up for the session, along with each person's preferred job. The session starting time and your preferred arrival time are listed beneath each calendar. There also are two checkboxes, one to join the session and the second to mark-off (remove their name from) the session. Beneath these checkboxes is a drop-down list of jobs so the person may express a preference.

A personal-information area appears at the bottom of the page (Figure 2.5). This is where the person must enter a name and e-mail address, and indicate model railroad operating experience. Of these five lines, only the first two are required because they give you, the railroad owner, important information about first-time crews. In particular, the second line causes Boomer Jack to insert a line in the confirmation e-mail that coerces the newcomer to look over your Web site to become familiar with the railroad.

Mark-up one of your test crews now. Check the **Join this session** box and choose a job preference. Do this for several sessions. As a further test, also check the **Mark-off this session** box for one or two other sessions, even if the test crew is not marked-up for them.

Type in the test crew name and e-mail address (in the confirmation field as well) at the bottom of the page, and check the yellow-highlighted **I am new to the Generic Railroad, but I will....** box. Also check the **I need driving directions** box.

Click the **Mark Up** button and you should see a simulated e-mail similar to the one on the next page. For continuity, the remainder of this section discusses the e-mails that are sent when people use the crew-call page, but be sure to read section 2.4.3 for more information about the crew-call page.

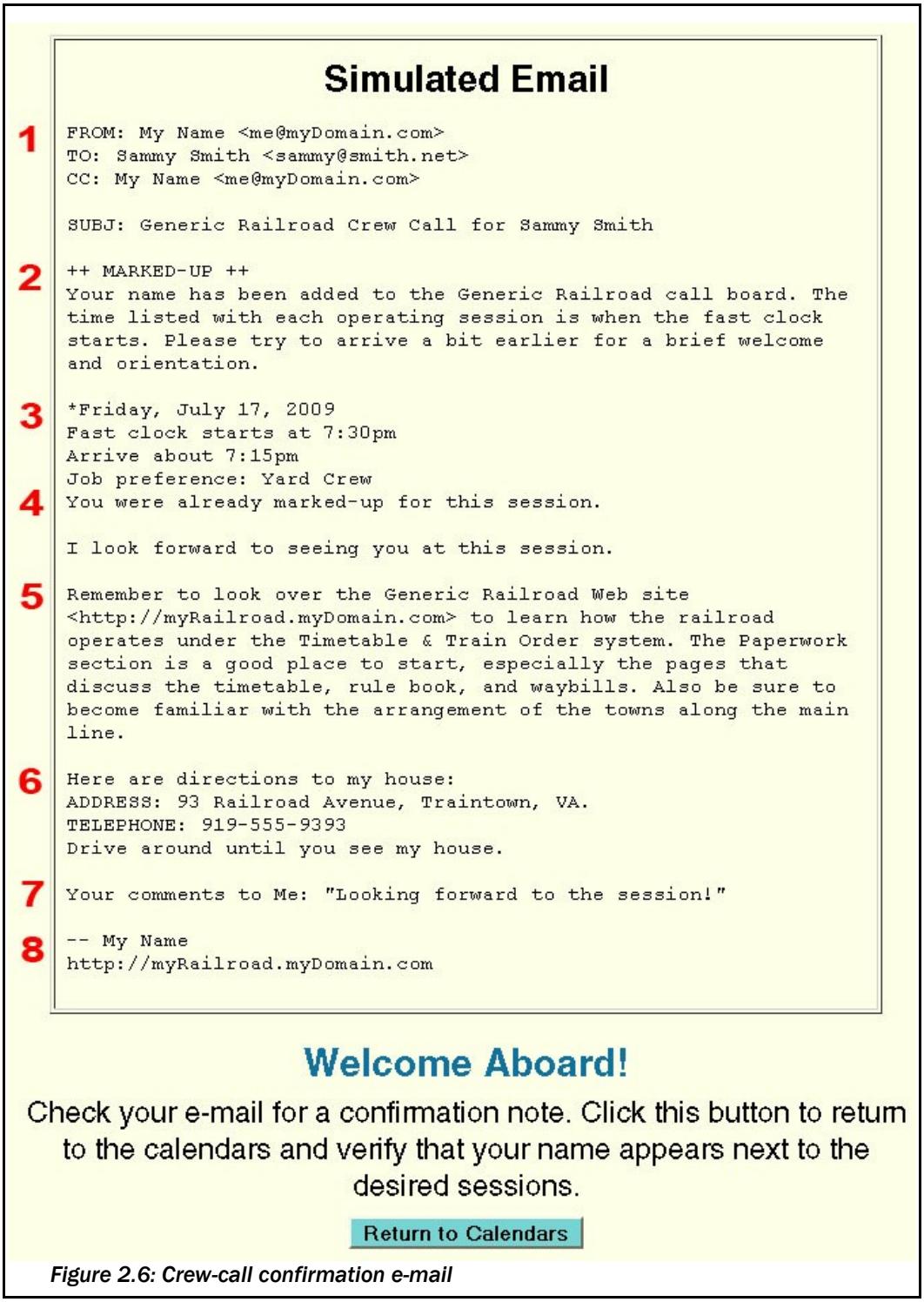

Simulated Email
1
FROM: My Name <me@myDomain.com>
TO: Sammy Smith <sammy@smith.net>
CC: My Name <me@myDomain.com>
SUBJ: Generic Railroad Crew Call for Sammy Smith
2
++ MARKED-UP ++
Your name has been added to the Generic Railroad call board. The time listed with each operating session is when the fast clock starts. Please try to arrive a bit earlier for a brief welcome and orientation.
3
*Friday, July 17, 2009
Fast clock starts at 7:30pm
Arrive about 7:15pm
Job preference: Yard Crew
4
You were already marked-up for this session.
I look forward to seeing you at this session.
5
Remember to look over the Generic Railroad Web site <http://myRailroad.myDomain.com> to learn how the railroad operates under the Timetable & Train Order system. The Paperwork section is a good place to start, especially the pages that discuss the timetable, rule book, and waybills. Also be sure to become familiar with the arrangement of the towns along the main line.
6
Here are directions to my house:
ADDRESS: 93 Railroad Avenue, Traintown, VA.
TELEPHONE: 919-555-9393
Drive around until you see my house.
7
Your comments to Me: "Looking forward to the session!"
8
-- My Name
http://myRailroad.myDomain.com
Welcome Aboard!
Check your e-mail for a confirmation note. Click this button to return to the calendars and verify that your name appears next to the desired sessions.
Return to Calendars

Figure 2.6: Crew-call confirmation e-mail

Notice these items in the e-mail:

1. The e-mail is sent *from* you *to* the person who marked-up, with a CC to you. Receiving a copy of the e-mail in your own in-box makes it easy to keep track of who signed-up, and to reply personally to the person if desired. Your e-mail address is the value of **$MY_EMAIL** that you set in step 1 of section 1.1.2 .
2. This paragraph explains the purpose of the e-mail.
3. Each session for which the person marked-up is listed here. If the person marked-off any sessions, the e-mail would contain a section that looks like this:

```
   -- MARKED-OFF --
As requested, your name has been removed from the Generic Railroad call board
for:

* Friday, November 20, 2009 7:30pm

I am sorry you can't make this session. You are welcome to join others at
<http://myRR.myDomain.com/bj_crew_call.php>.
```

The "your name has been removed..." text is contained in the **$SCRATCH_CONFIRM_1** constant, which you can customize in step 4 of section 1.1.2 . The second sentence of the "I am sorry..." text can be customized by editing the text for **$SCRATCH_CONFIRM_2** , but not the first sentence, which changes based on how many sessions were scratched.

4. In this case, Sammy Smith had already marked-up for the July 17 session, and this is just a reminder. This text is contained in **$ALREADY_SIGNED**, which you can customize in step 9 of section 1.1.2.
5. This "remember to look over..." paragraph is added if the person checks the **I am new to the Generic Railroad, but I will....** box. This text is contained in the **$NEWBIE_REMINDER** constant, which you can customize in step 8 of section 1.1.2 .
6. The driving directions are inserted when the person checks the **I need driving directions** box. This text is contained in the **$DRIVING_DIRECTIONS** constant, which you can customize in step 10 of section 1.1.2. As you can see from this example, you definitely *should* customize the driving directions.
7. Any comment the person entered on the crew-call page is included here in the e-mail.
8. The signature consists of the **$MY_NAME** and **$MY_WEB_URL** constants customized in step 1 of section 1.1.2 .

In normal operation, the simulated e-mail is not shown, but the **Welcome Aboard** text and button at the bottom of Figure 2.6 always appear. Clicking the button returns to the crew-call calendars so the person may mark-up for more sessions if desired.

Continue marketing-up test crews for sessions and look over the text in the e-mails to be sure it is satisfactory. When done, return to the Boomer Jack main Administration screen.

2.4.3. More about the crew-call page

Refer to the March 2009 session on the crew-call page in Figure 2.4, and notice these features:

- The session data is highlighted in yellow on the calendar, and the starting time and arrival time are listed below it.
- There are two positions open, and someone may join or mark-off this session.
- People already marked-up and their operating physician preferences appear to the right of the calendar.

Now look at the April 2009 session. As is evident from the dark calendar background and the message above it, this session is over. Consequently, several things change:

- The **Join** and **Mark-off** checkboxes are disabled because it's too late for these.
- Likewise, the **Job Preference** drop-down list is disabled for the same reason.

The May 2009 session has been canceled. Notice:

- The calendar displays a large red "no-entry" symbol to make the canceled session obvious, in

case someone misses misses the notice above it.

- The **Join** and **Mark-off** checkboxes and the **Job Preference** drop-down list are disabled. Once a session has been canceled, it makes no sense to allow these operations.

The June 2009 session illustrates what happens when a session fills up. You set the session capacity in section 1.1.2 with the value assigned to **$MY_MAX_SESSION_SLOTS**. Observe the following:

- The **Join this session** checkbox has changed to **Add me to the extra board**. People are not allowed to join a filled session, but they may mark-up on the extra board.
- The **Job Preference** drop-down list is enabled; even though people are marking up for the extra board, they may still express a job preference.
- The **Mark off this session** checkbox is enabled so that anyone who has signed up for the session or the extra board may withdraw.
- The list of crews to the right of the calendar shows those on the call board at the top, and those on the extra board at the bottom, prefixed with **-X-**.

2.4.4. How the extra board works

When a session reaches capacity, Boomer Jack automatically stops adding crews to the call board and adds them to the extra board instead. When someone marks-up for the extra board, the confirmation e-mail (Figure 2.6) changes slightly, like this:

```
   ------------------------
SUBJ: Generic Railroad Crew Call for Peter Piper
------------------------
++ MARKED-UP ++
Your name has been added to the Generic Railroad extra board for:

* Friday, July 17, 2009 --->EXTRA BOARD

I will notify you if a position opens for this session.

-- Mike Dodd
```

- The session details are replaced by a simple notice that the crew's name is being added to the extra board.
- The "remember to look over...the Web site..." paragraph is omitted.
- The driving directions are omitted.
- The "I look forward to seeing you..." sentence is replaced by "I will notify you if a position opens...."

One position opens each time someone marks-off the call board (not the extra board). When this occurs, Boomer Jack sends an e-mail to everyone whose name is on the extra board. That e-mail looks like this:

```
------------------------
SUBJ: GEN RR 6/19/09 ops session OPEN POSITION
------------------------
A position is open for the Generic Railroad operating session on Friday, June
19, 2009 at 7:30pm. You marked-up on the extra board, and if you would like to
participate in this session, Please visit
<http://myRR.myDomain.com/bj_crew_call.php> to sign-up. Names on the extra board
```

```
are marked with -X-.
```

It's possible (hopefully rare) that more than one person will mark-off the call board before those on the extra board mark-up. In this case, the e-mail above changes to indicate the actual number of open positions, instead of "A position."

As the railroad owner, you receive a copy of these e-mails.

2.4.5. Dealing with no-shows

It's annoying when someone marks-up for an operating session and then doesn't show up. At best, it's discourteous, but it can bollix up the works if you are counting on the person for a critical position. Boomer Jack allows you to monitor no-shows and put them on the extra board instead of the call board when they mark-up for a session after missing too many previous sessions. Here's how this works.

There are two constants in the *bj_constants.php* file that tell Boomer Jack how tolerant you are of no-shows.

Set **$NO_SHOW_MONTHS_BACK** to the number of months prior to latest held session to look back when counting no-shows. The default is six months. That is, Boomer Jack looks backward six months from the most recently-held session and counts the number of times each person marked-up but didn't attend within that span.

Set **$NO_SHOWS_TOO_MANY** to the number of sessions you consider "too many" to miss during the time span you set above. The default is three sessions. In other words, assuming the default values, if someone misses three sessions in the previous six months, that's too many, and Boomer Jack will put that person on the extra board if he marks-up for an upcoming session. This happens even if the session is not full. Being on the extra board means the person is not invited to the session.

Once someone has missed too many sessions and is in this "penalty box," the only way to get out is for you, the railroad owner, to set a flag on the Crew Administration screen that "forgives" the transgressions. With this box checked, Boomer Jack ignores the no-show count when the person marks-up for a session, so the name goes on the normal call board. See section 2.8.1 for details.

2.5 . Administering operating sessions

Click the **Sessions** button on the main Administration screen to cancel or restore sessions, mark them held, and mark crew attendance. You can see the Session Administration screen in Figure 2.7 on the next page. It resembles the crew-call screen with buttons added to perform the needed tasks.

Figure 2.7 shows six sessions. As with the crew-call screen, each session is represented as a highlighted date on a calendar. Calendars for completed sessions are shaded gray, and those for canceled sessions include a red "no entry" symbol. In addition, crews who signed up for each session are shown to the right of the calendar, along with drop-down boxes to indicate if they attended. The **Done** button with each calendar returns you to the main Administration screen.

The **$MY_CALENDARS_PER_ROW** constant in *bj_constants.php* tells Boomer Jack how many calendars to put on one row on this page and also on the crew-call page (Figure 2.4). The default value is 2, but change it as desired. Be careful displaying more than two calendars per row because the browser can wrap names and job preferences in the list of marked-up crews. to the right of the calendar.

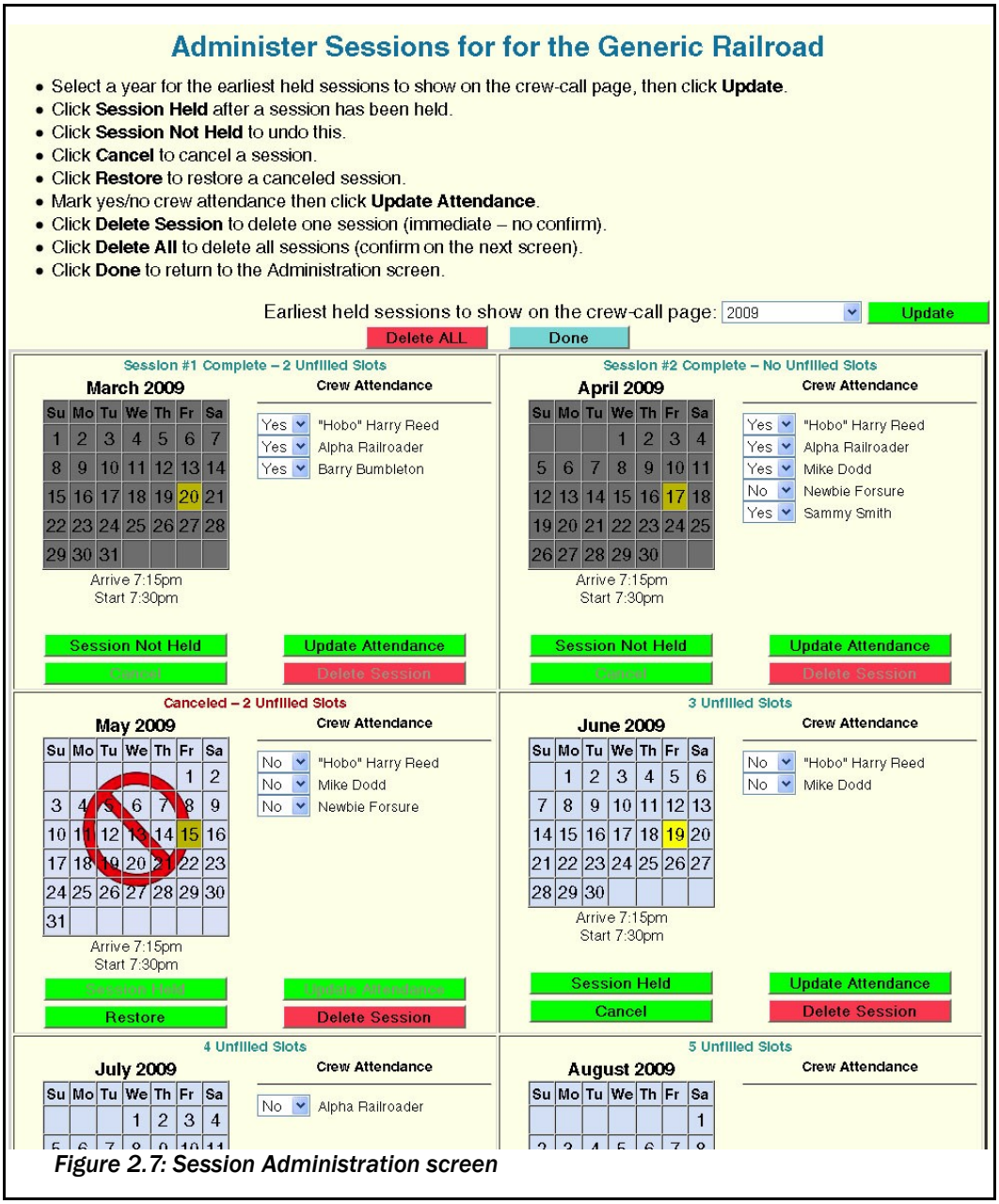


Figure 2.7: Session Administration screen

Notice the **Earliest held sessions to show on the crew-call page** field at the top of the screen. Often it's useful to show a few completed sessions on the crew-call page to give people a sense of your schedule. On the other hand, the page shouldn't be cluttered with dozens of "held" sessions because they make it hard to find the new sessions. Choose **Current year only** or any earlier session year, then click the **Update** button.

Also notice the red **Delete All** button at the top of the screen. See section 2.5.6 for details about deleting *all* sessions in the database.

Observe the following about these sessions:

March and April

- These sessions have been held.
- The **Session Not Held** button beneath each calendar allows you to mark that session as "not held."

- The **Cancel** buttons are disabled, because it is not possible to cancel sessions after they are held.
- Crew attendance already has been recorded, and can be seen next to each calendar. The **Update Attendance** buttons are enabled so attendance can be updated further.

May

- This session has been canceled.
- The **Restore** button is enabled, so the session may be "un-canceled" if circumstances change.
- The **Session Held** button is disabled because it is not possible to hold a canceled session; you must restore it first.
- The **Update Attendance** button Is disabled because it is not possible to update attendance for a canceled session; you must restore it first.

June

- This session has not been held.
- The **Cancel** button is enabled, so it is possible to cancel this session.
- The **Session Held** button is enabled.
- The **Update Attendance** button is enabled so attendance can be updated (afterward, the session should be marked "held").

2.5.1. Marking sessions "held" and "not held"

Click the **Session Held** button to indicate that a session is over. You should see the following e-mail if you're simulating e-mails.

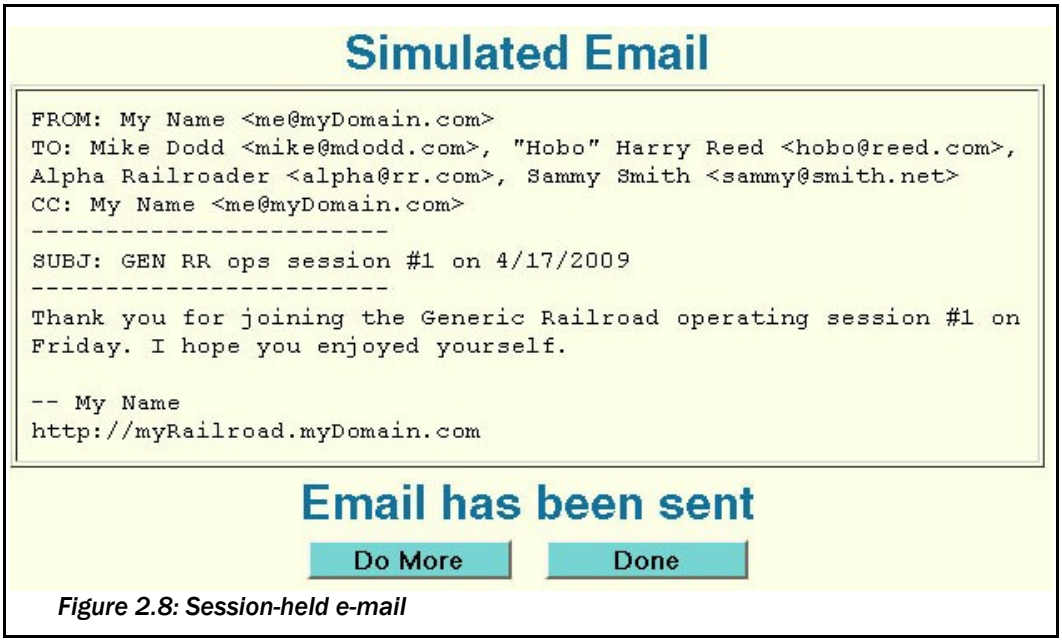


Figure 2.8: Session-held e-mail

This e-mail is sent to those crews to came to the session. Notice that it is not sent to Newbie Forsure, who did not attend, as shown in Figure 2.7. If photos have been added for the session, the e-mail includes the session photos page URL . In this example, no photos have been added so there's no mention of the photos page.

2.5.2. Canceling sessions

Click the **Cancel** button to cancel a session. You should see this e-mail.

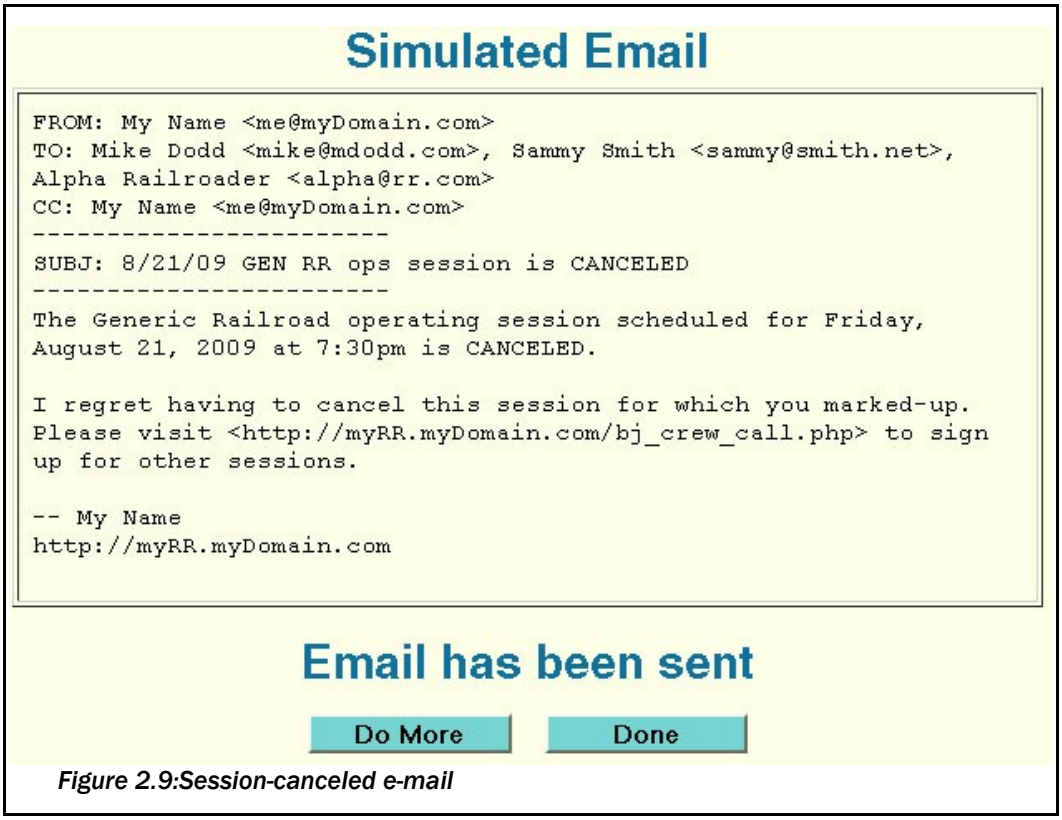


Figure 2.9:Session-canceled e-mail

This e-mail notifies everyone who is marked-up for the session that it has been canceled. It also includes the crew-call URL so they may sign-up for other sessions.

2.5.3. Restoring canceled sessions

Click the **Restore** button to restore a canceled session and this e-mail will be sent:

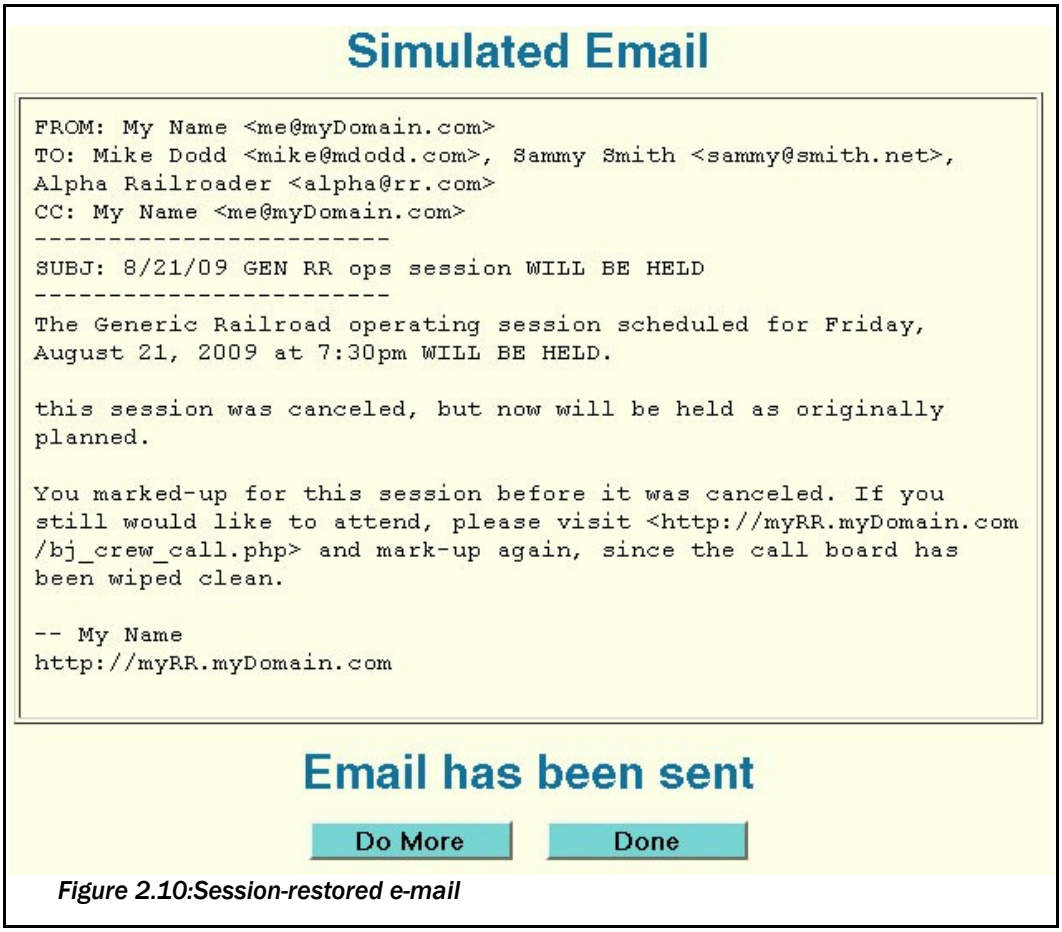


Figure 2.10:Session-restored e-mail

This e-mail goes to everyone who marked-up for the restored session before it was canceled. Restoring a session is the same as creating a new one, so the call board is blank. As the e-mail explains, anyone who wants to attend the restored session must return to the crew-call page and mark-up again. This provides you with up-to-date information, instead of relying on the original mark-ups, which may no longer be valid. For example, someone could have made other plans, and now might not be able to attend the restored session.

2.5.4. Marking crew attendance

Over time, it can be useful for the railroad owner to keep track who attended operating sessions and who didn't. To record this, select **Yes** or **No** from the drop-down next to each person's name, then click the **Update Attendance** button. The screen will refresh and display the updated attendance. This button is disabled for canceled sessions.

2.5.5. Deleting a session

Click the **Delete** button near a calendar to delete that session. The session is deleted immediately; you are not asked to confirm the action. Create the session again if you didn't intend to delete it.

2.5.6. Deleting all sessions

Click the **Delete All** button to delete *all* sessions. You are asked to confirm this drastic action before it takes place. Once deleted, the sessions cannot be recovered. You might want to do this if you have created a number of sessions for testing purposes, and are ready to put Boomer Jack into production.

2.6 Creating data for session name tags

In the main Administration screen, click the **Name Tags** button to create data you can use with other software to print crew name tags for an operating session. Boomer Jack displays a set of calendars similar to the crew-call and Session Administration screens.

Figure 2.11 on the next page shows one of these calendars and the name tag data that results from clicking the **Create Name Tag Data** button.

The name tag data consists of each crew's first and last names, each surrounded with quotation marks and separated by a comma. This is the standard "CSV" (comma-separated values) format recognized by spreadsheets and many other programs.

Use your computer's mouse to select (highlight) the lines in the yellow area then copy them to the clipboard (Edit->Copy, right-click->Copy, or Ctrl+C). Open a text editor such as Notepad and paste the data into the blank document (Edit->Paste, right-click->Paste, or Ctrl+V). Save the document to your computer's hard drive as a text file with a **.csv** extension.

Launch your spreadsheet software and open the file. Each person's name should appear on a separate row, with the first name in the first column and the last name in the second column. From there, it should be a simple matter to print individual name tags from this data.

Another option is a specialized label printer, such as those made by Brother or Dymo. These printers come with software that can read CSV files and immediately print name tags from the data.

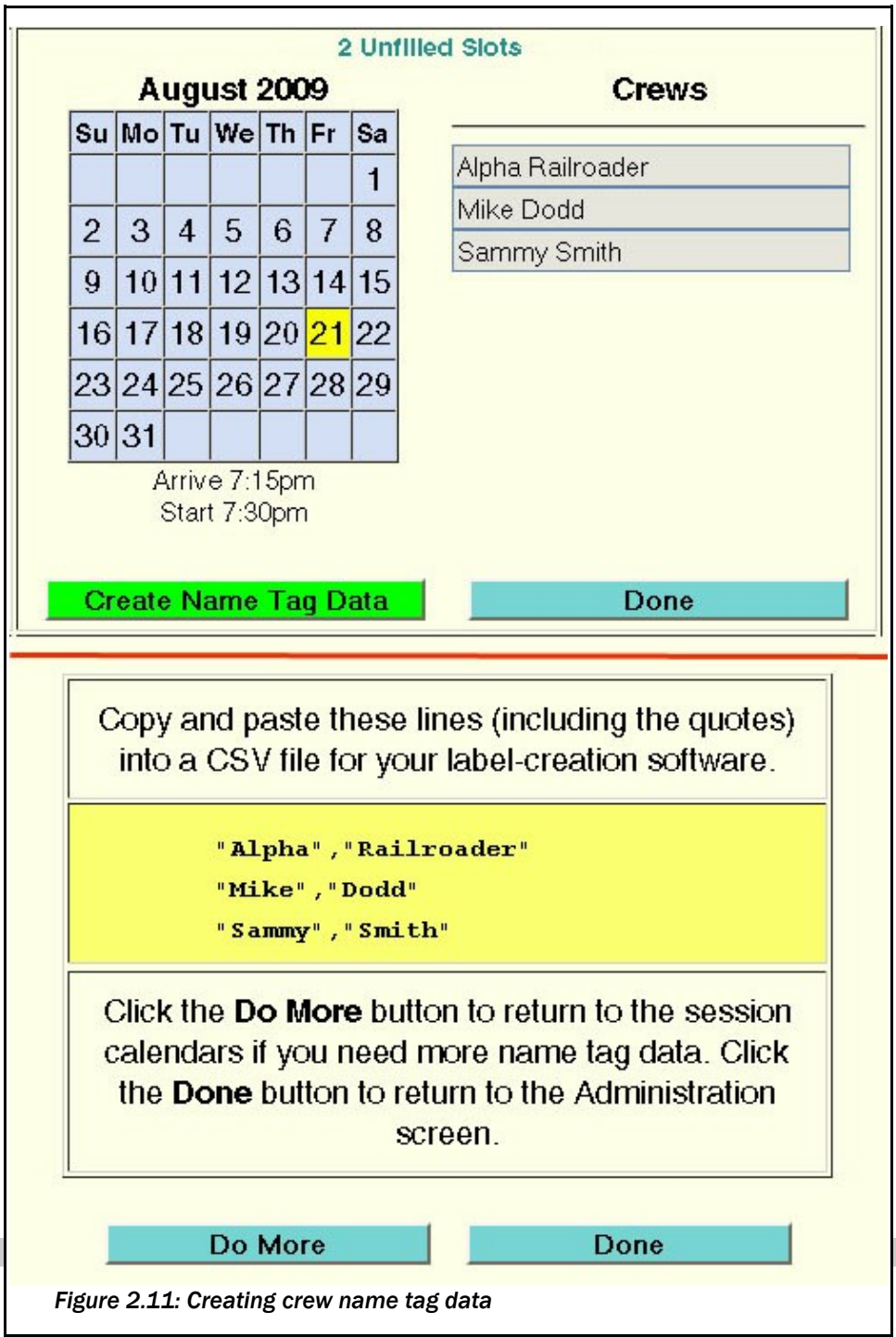

2 Unfilled Slots
August 2009
Su Mo Tu We Th Fr Sa
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
Arrive 7:15pm
Start 7:30pm
Crews
Alpha Railroader
Mike Dodd
Sammy Smith
Create Name Tag Data
Done
Copy and paste these lines (including the quotes) into a CSV file for your label-creation software.
"Alpha","Railroader"
"Mike","Dodd"
"Sammy","Smith"
Click the Do More button to return to the session calendars if you need more name tag data. Click the Done button to return to the Administration screen.
Do More
Done

Figure 2.11: Creating crew name tag data

2.7 Adding session photos

Many railroad owners add photos to their Web site after an operating session, and Boomer Jack makes it easy to do this. Click the **Photos** button to reach this screen:

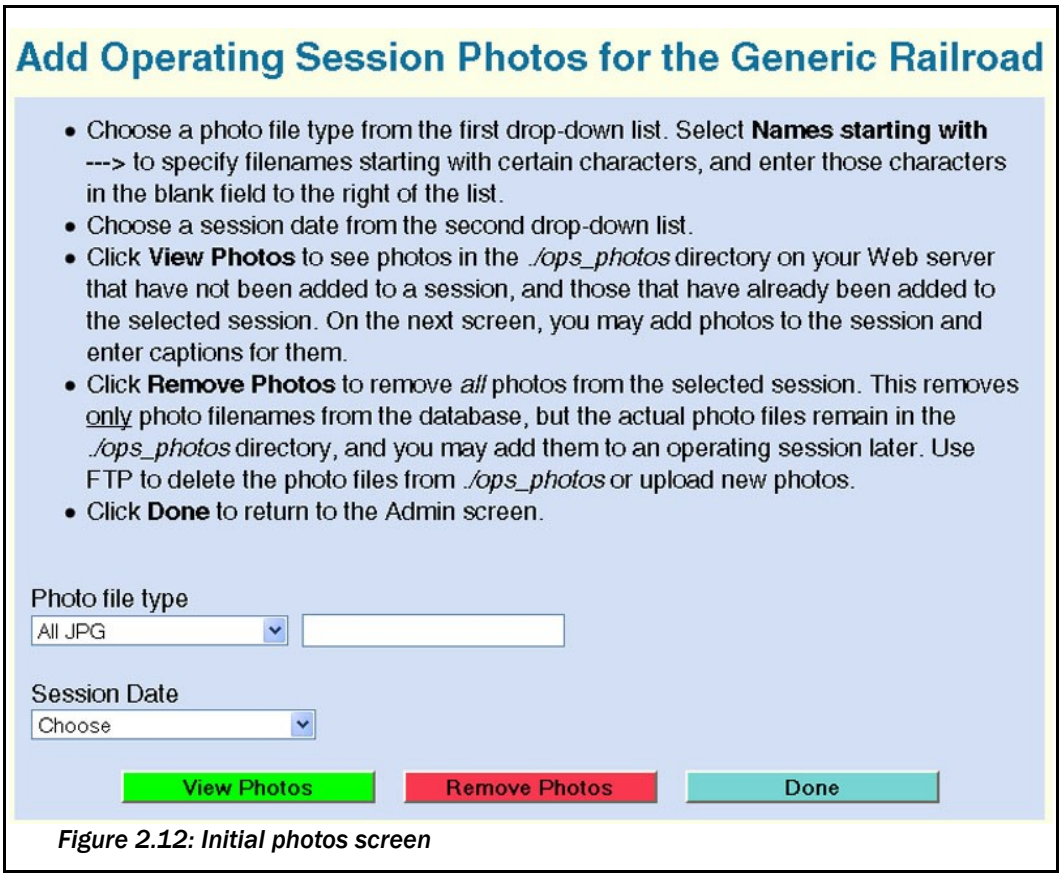

Add Operating Session Photos for the Generic Railroad
• Choose a photo file type from the first drop-down list. Select Names starting with ---> to specify filenames starting with certain characters, and enter those characters in the blank field to the right of the list.
• Choose a session date from the second drop-down list.
• Click View Photos to see photos in the ./ops_photos directory on your Web server that have not been added to a session, and those that have already been added to the selected session. On the next screen, you may add photos to the session and enter captions for them.
• Click Remove Photos to remove all photos from the selected session. This removes only photo filenames from the database, but the actual photo files remain in the ./ops_photos directory, and you may add them to an operating session later. Use FTP to delete the photo files from ./ops_photos or upload new photos.
• Click Done to return to the Admin screen.
Photo file type
All JPG
Session Date
Choose
View Photos
Remove Photos
Done

Figure 2.12: Initial photos screen

Boomer Jack stores photo *filenames* in the database, not the actual photos themselves. You must upload the photos to the directory on your Web server that you specified for **$MY_OPS_POHOTOS_DIR** in step 1 of section 1.1.2. Once uploaded, the photo files remain on the server until you delete them; Boomer Jack never deletes your files.

Select the photo file type from the first drop-down list. Boomer Jack is configured to look for all files ending with **.jpg, .gif**, or **.png**, as well as *all* files.

You may choose **Names starting with—>** from the list and enter the first few characters of the filename in the blank field to the right. This can be helpful if you name files similarly, such as *20090717-01.jpg, 2009-July-02.jpg, 2009-July-03.jpg,* etc. Enter *2009-July* and Boomer Jack will show you all photos whose names begin with those characters. The text is not case-sensitive; you could enter *2009-july* or *2009-JULY* and get the same result.

Select the session date from the second drop-down list. A note next to the date tells if the session has been held. In addition, the number of photos already added to the session is shown.

Here's an important note about the session date list. It contains all sessions earlier than the current date, even those that haven't been held. It might seem better to populate the list only with completed sessions, but this creates problems elsewhere. Marking a session "held" in the Session Administration screen sends an e-mail to crews who participated. If photos have been added to the session, that e-mail includes the URL of your session photos page, but the URL is omitted if no photos have been added. As you can see, this makes it impossible to first mark a session "held," then add photos to it and include the photos URL in the e-mail. The e-mail is sent without the URL before photos can be added.

Thus, for photos to be added before the session-complete e-mail is sent, the list must include all earlier sessions, whether they've been held or not. Without a limit of some sort, the list would grow to an unmanageable length. You can set this limit by editing the value of $NUM_SESSIONS_ON_PHOTOS in the bj_constants.php file. The default is 12 sessions.

Click the **Remove Photos** button to remove all photo filenames from the selected session.

Click the **View Photos** button to go to the next screen where you can choose the photos to add to the session. *This screen will open slowly if your photo files are large.*

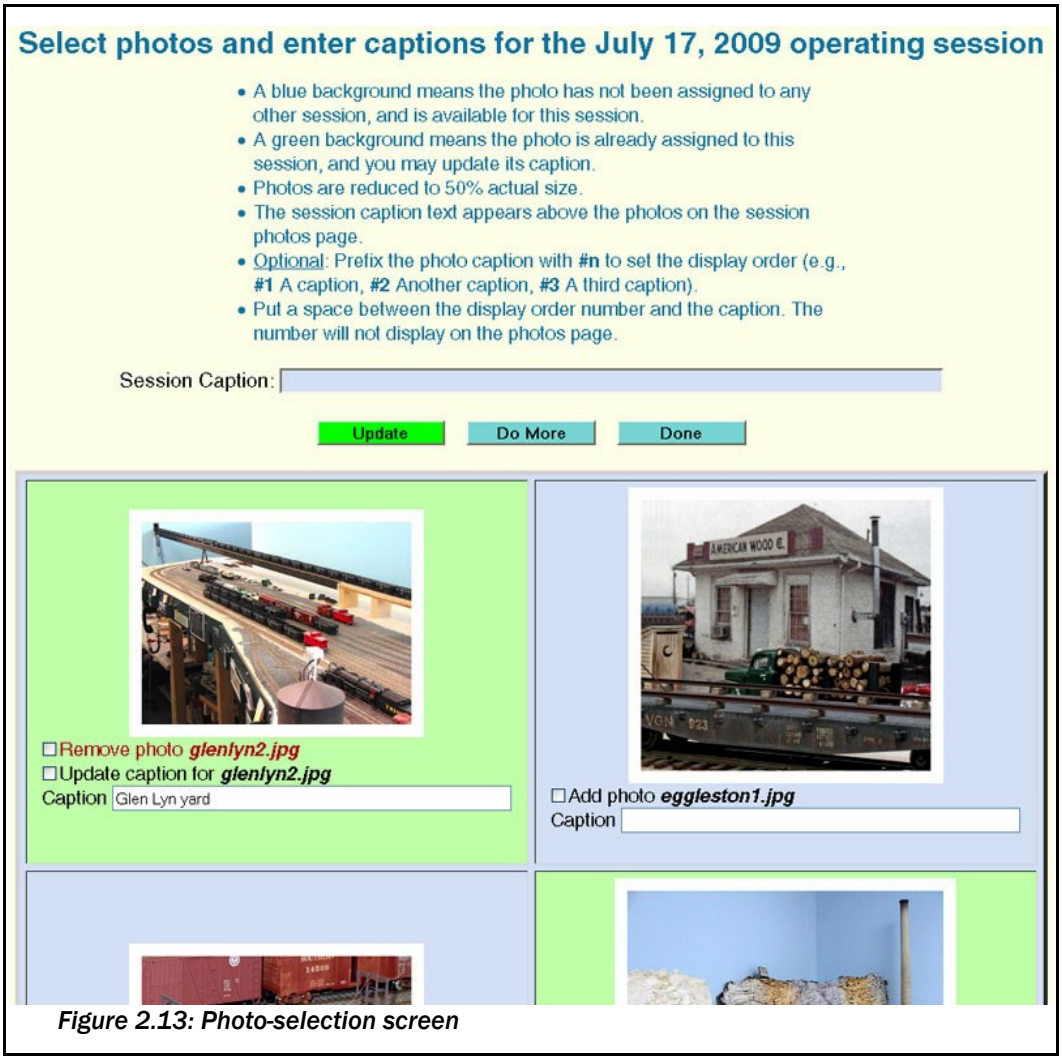

Select photos and enter captions for the July 17, 2009 operating session
A blue background means the photo has not been assigned to any other session, and is available for this session.
A green background means the photo is already assigned to this session, and you may update its caption.
Photos are reduced to 50% actual size.
The session caption text appears above the photos on the session photos page.
Optional: Prefix the photo caption with #n to set the display order (e.g., #1 A caption, #2 Another caption, #3 A third caption).
Put a space between the display order number and the caption. The number will not display on the photos page.
Session Caption:
Update
Do More
Done
Remove photo glenlyn2.jpg
Update caption for glenlyn2.jpg
Caption
Glen Lyn yard
Add photo eggleston1.jpg
Caption

Figure 2.13: Photo-selection screen

Photos with a green background already have been added to this session. Those with a blue background haven't been added to any session, and are available for this one. A photo may be added to only *one* session; if you want to add the same photo to another session, copy it with a different filename and add the new file to the second session.

> The photos are reduced in size to show as many as possible together. This conserves space, but doesn't save any time loading the page, since the full-size file must be read. You can set the scaling ratio by editing the value of **$PHOTO_SCALE** in the *bj_constants.php* file. The default value is 0.5 for 50%. A value of 0.1 displays the photos at 10% of their true size (tiny), 0.75 scales them to 75% of their true size, and 1.0 (100%) displays the photos full size.

All photos already added to the selected session are displayed on this screen, even if they don't match the file type you specified on the previous screen. In other words, if you asked for all JPG files and you've already added some GIF files to this session, the JPG *and* the GIF photos are displayed. Likewise, if you specified filenames starting with *2009-July* and you've already added photos with different names to the session, all are displayed.

Check the **Add photo** box beneath the photos you want to add, and enter a caption for each photo. Captions may be up to 250 characters long; the text scrolls horizontally when you reach the right endof the field. Notice that you can only *update captions* for photos already added to the session; you can't add a photo more than once.

Optional: You may prefix the caption text with a # and a number to indicate the order you wish the photos displayed (see Figure 2.13). *There must be a space between the number and the caption text.* Examples: **#2 Rock quarry, #1 No. 77 at the junction, #3 Downtown scene**. The photos are displayed in the specified order on the session photos page, but the order-number is removed from the caption there.

Click the **Remove photo** box to remove the photo from this session. This removes only the filename from the database; the photo file itself remains on the server.

Take a look at Figure 3.5 to see how the Web site's session photos page appears.

Click the **Update** button to update the database with your changes. This screen summarizes what was done:

Add Photos
Results:
Updated caption for glenlyn2.jpg #1 Glen Lyn yard.
Updated caption for eggleston1.jpg #2 VGN pulpwood car at Eggleston.
Do More
Done

Figure 2.14:Result of adding photos

Boomer Jack reports which filenames were added, along with their associated captions. The report reads "Updated captions for..." for photos for which only the caption changed, and "Added..." for those new photos added to the session. Removed photos are listed as well.

Click the **Do More** button here or on the photo-selection screen (Figure 2.13) to return to the initial photos screen (Figure 2.12) where you can select a different session date or different type of photos. Click the **Done** button to return to the main Administration screen.

2.8 . Administering crews

2.8.1 Editing crew information

Click the **Crews** button on the main Administration screen (Figure 2.1) to view or update crew data. This screen appears.

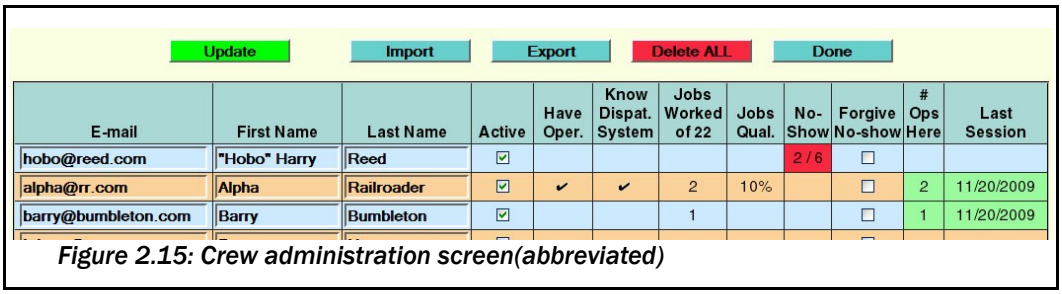


Figure 2.15: Crew administration screen(abbreviated)

This is a list of all crews. A crew record is created the first time a person marks-up for an operating session, and you can update crew information here.

In addition to viewing and updating individual crew data records, this screen is where you can import and export crew data, and delete all crews. See sections 2.8.2 through 2.8.4 for details about these operations.

The list displays each person's e-mail, first name, and last name, along with their experience operating on model railroads, and information about participation in your sessions.

You may edit the e-mail and name fields as desired, but Boomer Jack updates them each time someone marks-up on the crew-call page, according to these rules:

- If the *e-mail address* on the crew-call page matches the e-mail address in the database, Boomer Jack updates the *name* with the name from the crew-call page.
- If the *name* on the crew-call page matches name in the database, Boomer Jack updates the *e-mail address* with the e-mail address from the crew-call page.

The benefit of this scheme is that crew names and e-mail addresses are always up-to-date. The possible downside is that a name or e-mail address entered on the crew-call page will wipe out a change you make here.

Uncheck the **Active** box to "deactivate" crews who seem to have lost interest or have disappeared. Boomer Jack uses this flag when populating the list that appears when you click the **E-mail Crews** button on the main Administration screen. Even if this flag is unchecked, it is always checked when someone marks-up for a session, as this indicates renewed interest.

The **Have Operated** column is marked if the person checked the "I have operated on model railroads..." box on the crew-call page.

The **Know Op System** column is marked if the person checked the "I am familiar with operations using the... [your dispatching system]" box on the crew-call page.

The **Jobs Worked** and **Jobs Qualified** columns show job experience. The first column shows the number of *different* jobs each crew has worked. The column header includes the total number of jobs you've defined on the Job Administration screen (section 2.10.1). Working the same job more than once counts as only one. The second column tells what percentage of "experience points" the crew is earned. As explained in section 2.10.1, you can assign experience points for crews to earn with each job worked. The **Jobs Qualified** column sums the points each crew has earned and divides it by the total points

you've assigned to all jobs. There is no direct correlation between this percentage and the *number* of jobs worked because some of the jobs might be assigned zero points.

The **# Ops Here** column shows the total number of times this person has operated on your railroad, and the **Last Session** column shows the date of the most recent session.

Click the **Update** button to save your changes. Afterward, the screen refreshes with the current data.

The N**o-show** and **Forgive No-show** columns help you monitor and react to crews who mark-up for sessions but don't come (record attendance on the Session Admin screen, section 2.5.4). The **No-show** column displays the number of sessions the crew missed in the past "n" months. "N" is determined by the value you assign to **$NO_SHOW_MONTHS_BACK** in *bj_constants.php*; the default is six months.

If a crew misses too many sessions, the **No-show** column changes color. Set the value of **$NO_SHOWS_TOO_MANY** in *bj_constants.php* to the number of missed sessions you consider to be "too many." The default is three. If the crew misses this many or more sessions, the column turns red; if the crew misses half this many, the column turns yellow.

Not only does **$NO_SHOWS_TOO_MANY** control the color of the **No-show** column, it also determines if a person is invited to a session when marking-up. Section 2.4.5 explains how this works.

Check the **Forgive No-show** box for Boomer Jack to allow a crew having too many no-shows to go on the call board instead of the extra board. You might do this if a regular crew experienced several instances of car trouble, and/or was considerate enough to call before the session.

2.8.2. Importing crew data

It's possible that you have crew names and addresses elsewhere, such as in your e-mail software, and you'd like to bring them into Boomer Jack. You can do this, but Web programming standards are restrictive, and make this more complicated than you might expect.

The first question to ask yourself is why you want to bring in these names. Normally, crew names are entered into the database when people mark-up for operating sessions. If you import crews, the Crew Administration screen will indicate that these people as having *never* participated in an operating session. This might be misleading if you've imported a list of crews who operated before you started using Boomer Jack. On the other hand, Boomer Jack can send e-mail to all of these people at once, as explained in section 2.9, which might be useful.

Assuming you really do want to import crew names, this is the process:

- Export the names and e-mail addresses from your other software in a CSV (comma-separated values) format to a file on your computer's hard drive. The order of the fields is first name, last name, e-mail address, and each line must contain exactly one person's data. Each field must be surrounded with quotation marks, and fields must be separated by commas. The text inside a field may not contain a quotation mark, as this thoroughly confuses any software attempting to read CSV data. Here are two correctly-formatted CSV records:

  ```
  "'Hobo' Harry","Reed","hobo@reed.com"
  "Alpha","Railroader","alpha@rr.com"
  ```

  Notice that the first record uses (must use) apostrophes instead of quotation marks around the nickname "Hobo" in the first-name field.

- Once you have created the CSV file, click the **Import** button on the Crew Administration screen (Figure 2.15). Next open the file in a text editor such as Notepad, then select all of the text (Edit->Select All or Ctrl+A) and copy it (Edit->Copy, right-click->Copy, or Ctrl+C) . Once copied, paste it (Edit->Paste, right-click->Paste, or Ctrl+V) into the text area on Boomer Jack's crew-import screen (Figure 2.16).

- Click the **Import** button to add the crew data to the database. When this operation is complete, you'll see a screen reporting how many names were added and how many were updated. Boomer Jack updates a crew record that already exists; it does not duplicate crews. If a record exists with the same first and last names *or* a matching e-mail address, that record is updated. If the first and last names don't match *and* the e-mail address doesn't match, Boomer Jack adds a record.

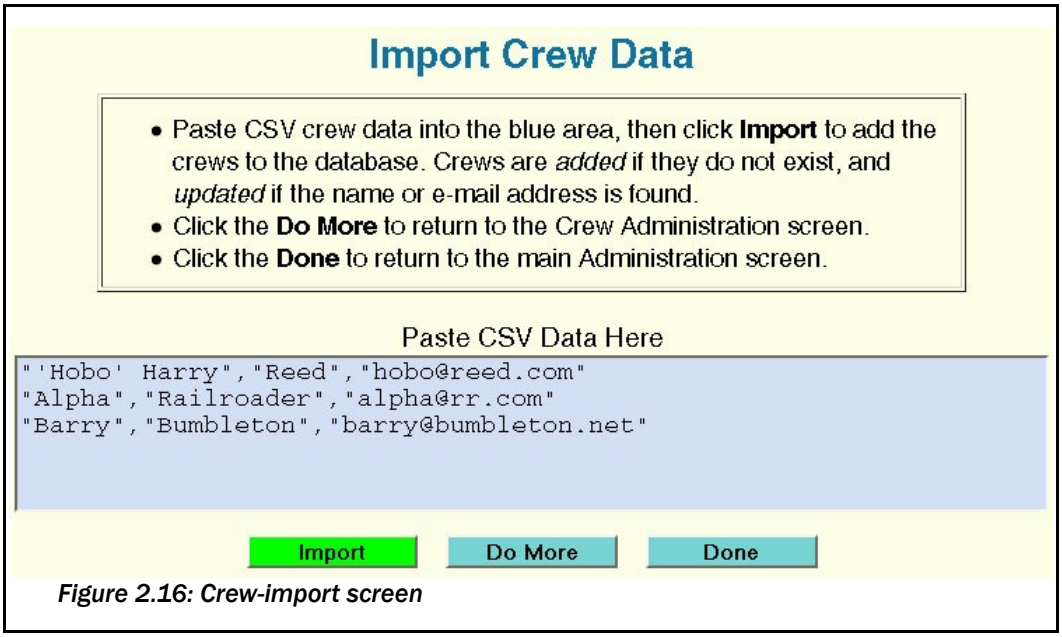

Import Crew Data
Paste CSV crew data into the blue area, then click Import to add the crews to the database. Crews are added if they do not exist, and updated if the name or e-mail address is found.
Click the Do More to return to the Crew Administration screen.
Click the Done to return to the main Administration screen.
Paste CSV Data Here
"'Hobo' Harry","Reed","hobo@reed.com"
"Alpha","Railroader","alpha@rr.com"
"Barry","Bumbleton","barry@bumbleton.net"
Import
Do More
Done

Figure 2.16: Crew-import screen

2.8.3. Exporting crew data

Exporting crew data is similar to importing. Boomer Jack displays the data in CSV format, and you copy at and paste it into a text file that you save to your hard drive. This is the same process you followed to create crew name tag data in section 2.6.

This is the process to export crew data:

- Click the **Export** button on the Crew Administration screen (Figure 2.15). Boomer Jack displays the CSV-formatted data as shown here.

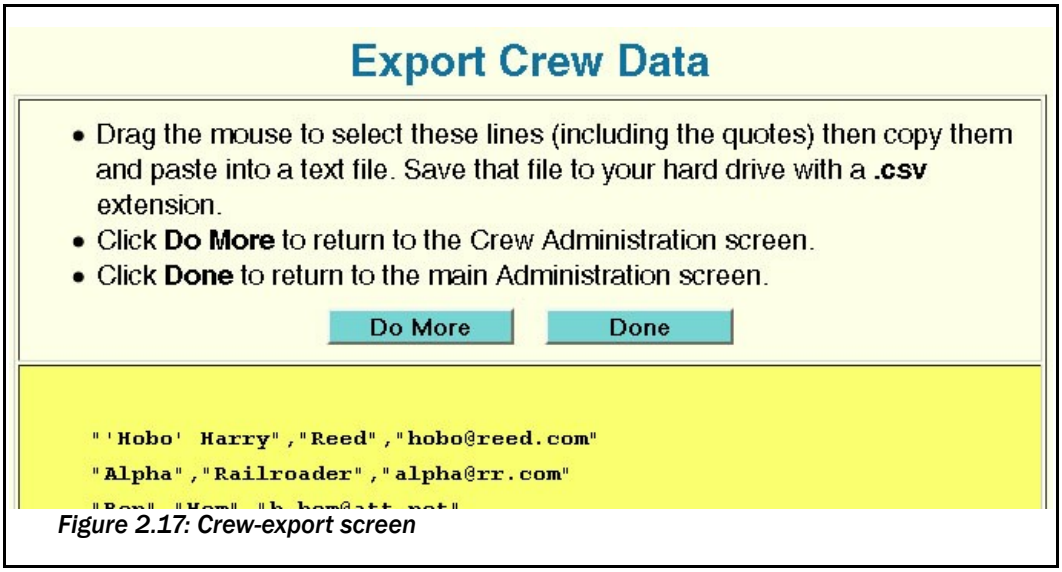

Export Crew Data
Drag the mouse to select these lines (including the quotes) then copy them and paste into a text file. Save that file to your hard drive with a .csv extension.
Click Do More to return to the Crew Administration screen.
Click Done to return to the main Administration screen.
Do More
Done
"'Hobo' Harry","Reed","hobo@reed.com"
"Alpha","Railroader","alpha@rr.com"

Figure 2.17: Crew-export screen

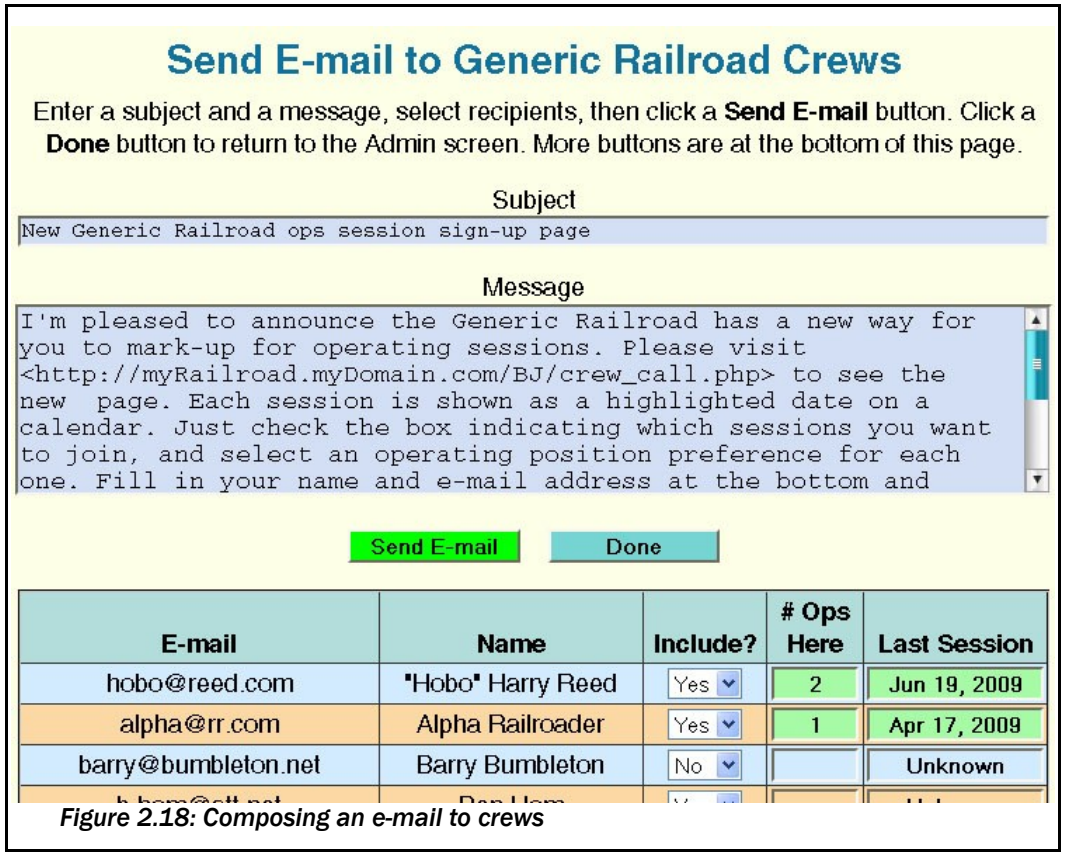
- Only the crew names which are marked "active" on the Crew Administration screen (Figure 2.15) are included in this list. Use your computer's mouse to select (highlight) all the lines in the yellow area then copy them (Edit->Copy, right-click->Copy, or Ctrl+C). Open a text editor and paste the data into the blank document (Edit->Paste, right-click->Paste, or Ctrl+V). Save the document to your computer's hard drive as a text file with a **.csv** extension. The order of the fields is first-name, last-name, e-mail address, and one person's data appears on each line. Each field is surrounded with quotation marks, and fields are separated by commas.
- Once you have created the CSV file, you can import it into other software such as a spreadsheet, word processor, or possibly an e-mail program.

2.8.4. Deleting all crews

Click the **Delete All** button to delete *all* crews in the database. Do this only if you are absolutely certain, because once deleted, the crews cannot be recovered. You will be asked to confirm first. You might want to do this if you have created a number of made-up crew names for testing purposes, and are ready to put Boomer Jack into production.

2.9. Sending e-mail to crews

Click the **E-Mail Crews** button in the main Administration screen (Figure 2.1) if you want to send an e-mail to one or more people. Compose your e-mail and select recipients:


Send E-mail to Generic Railroad Crews
Enter a subject and a message, select recipients, then click a Send E-mail button. Click a Done button to return to the Admin screen. More buttons are at the bottom of this page.
Subject
New Generic Railroad ops session sign-up page
Message
I'm pleased to announce the Generic Railroad has a new way for you to mark-up for operating sessions. Please visit <http://myRailroad.myDomain.com/BJ/crew_call.php> to see the new page. Each session is shown as a highlighted date on a calendar. Just check the box indicating which sessions you want to join, and select an operating position preference for each one. Fill in your name and e-mail address at the bottom and
Send E-mail
Done
E-mail
Name
Include?
Ops Here
Last Session
hobo@reed.com
"Hobo" Harry Reed
Yes
2
Jun 19, 2009
alpha@rr.com
Alpha Railroader
Yes
1
Apr 17, 2009
barry@bumbleton.net
Barry Bumbleton
No
Unknown
Figure 2.18: Composing an e-mail to crews

Enter a subject and the message you want to send. The lower portion of this screen resembles the crew-administration screen shown in Figure 2.15. The **Include?** column indicates whether a person will

or will not receive the e-mail. This column is initially set to Yes if the person is marked "active" on the Crew Administration screen. It's set to **No** if the crew is inactive. Scroll through the list and change **Include?** as desired.

Click the **Send E-mail** button when you are ready to send your e-mail, and you should see a simulated e-mail similar to this one.

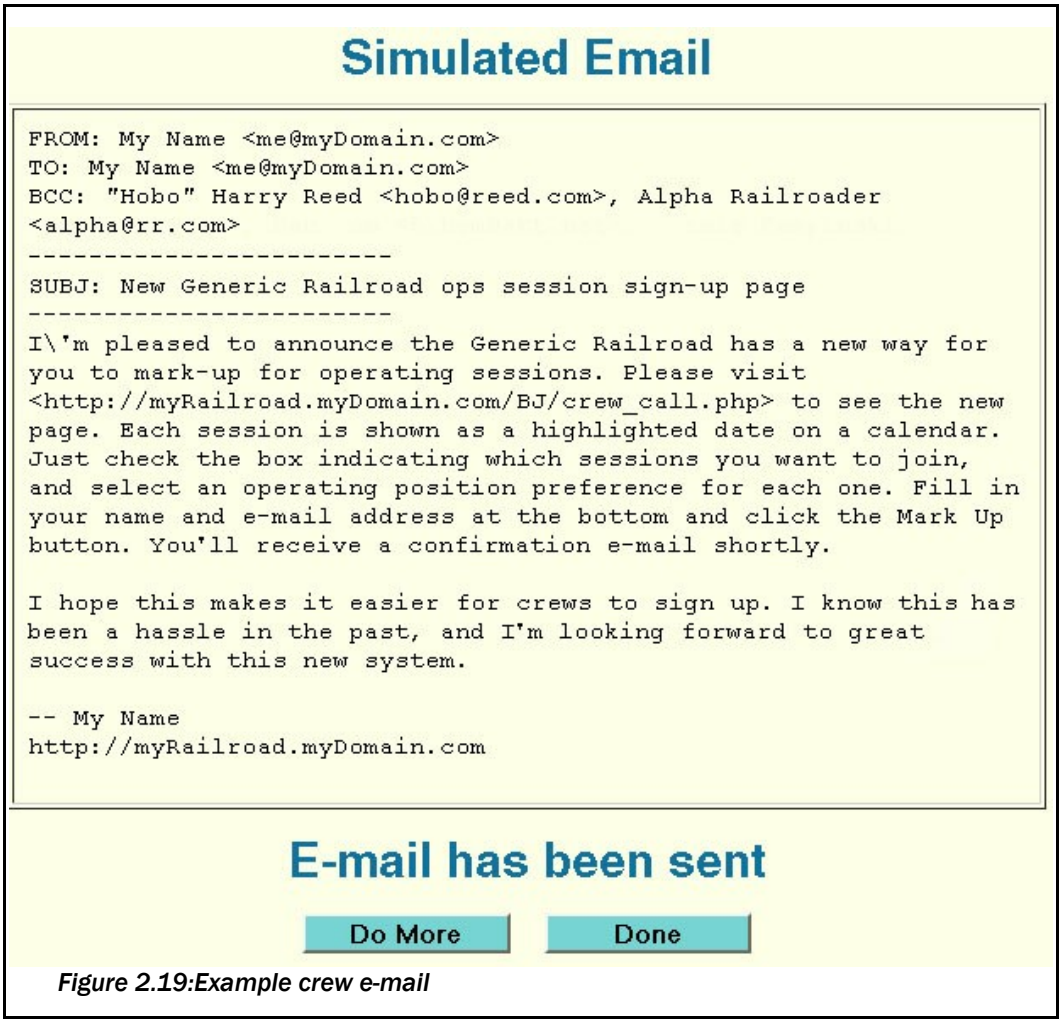


Figure 2.19:Example crew e-mail

Notice that the e-mail is sent *to* you and BCC to "Hobo" Harry Reed and Alpha Railroader, but not to Barry Bumbleton, who was not included in Figure 2.18 . All recipients are BCC (blind copy) for privacy. In normal operation, the simulated e-mail is not shown, but the **E-mail has been sent** message and button at the bottom always appear. Clicking the **Do More** button returns you to the initial e-mail composition screen, and clicking the **Done** button takes you back to the main Administration screen (Figure 2.1).

2.10. Jobs

You may define jobs for crews to perform while operating on your railroad. A job might exist for the entire session, such as Dispatcher or Yard Master, or could be a single train. Jobs in Boomer Jack have two benefits: Crews may express a preference when they mark-up for an operating session on the crew-call page (Figure 2.4 and Figure 3.1), and crews may earn "experience points" as they become more proficient.

2.10.1. Administering jobs

You can add or delete jobs, edit their titles, control their appearance and order on the crew-call job-preference list, and set "experience points" for each job. Click the **Job Admin** button on the main Administration screen to do this. All jobs appear on this screen:

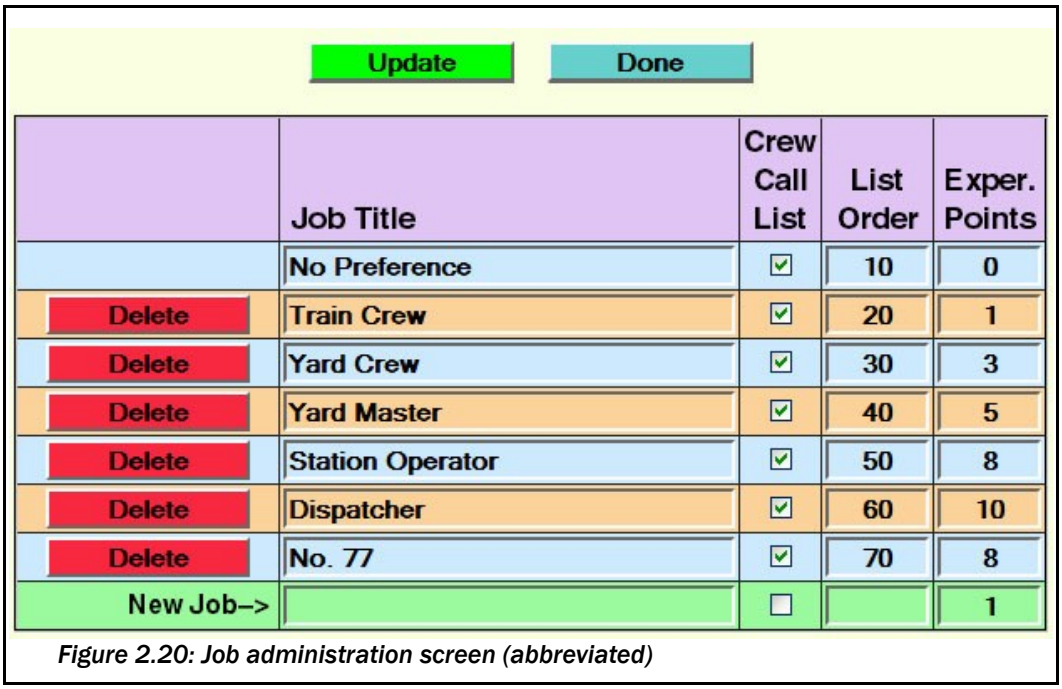


Figure 2.20: Job administration screen (abbreviated)

The **Crew Call List** column indicates if you want a job to appear on the crew-call job-preference list. As explained in section 2.10.2, you should define *every* job on the railroad, even those such as an extra train that ran once during one operating session. However, only the *standard* jobs should appear on the job-preference list, not the session-specific jobs.

Set a job's position in the job-preference list by entering a number in the **List Order** column. The *No Preference* job always appears on the list, and is always first.

The **Exper. Qualify** column indicates if a crew earns "experience points" by performing that job. Enter the number of points the job is worth. See section 2.8.1 for more information about job experience points.

Create a new job by entering its title and other information in the green **New Job** row at the bottom of the screen.

To make it easy to insert a new job between two existing jobs, Boomer Jack automatically renumbers the list order by tens each time you click **Update**. To insert a new job between two others, choose a list-order number between those two. For instance, to insert *The Cannonball* between between *Yard Crew* and *Yard Master,* set its list-order to any number from 31 to 39 and click **Update**. *The Cannonball* will appear in its correct position (with list-order renumbered).

Click the **Update** button when you have finished making your changes.

Click a red **Delete** button to delete that job. There is no confirmation for this; the job is deleted immediately. If you delete a job by accident, just add it again in the **New Job** row.

The *No Preference* item cannot be deleted, because Boomer Jack uses it when composing the e-mail to crews who marked-up for operating sessions. You may change the text (e.g., perhaps to *No Clue, I Don't* Care, or *Whatever*) or the list-order if you wish, but you may not delete it.

If you don't want crews to express a preference, set **Crew Call List** to No or delete all jobs except *No Preference*. The job-preference list will still appear on the crew-call page, but will contain only that one item, and the confirmation e-mail won't mention a job preference.

Click the **Done** button to return to the main Administration screen.

2.10.2. Assigning jobs to crews

Click the **Job Assignments** button on the main Administration screen to assign jobs to crews for an operating session. Select a session from the list that appears, then click the **Assign Jobs** button to reach this screen.

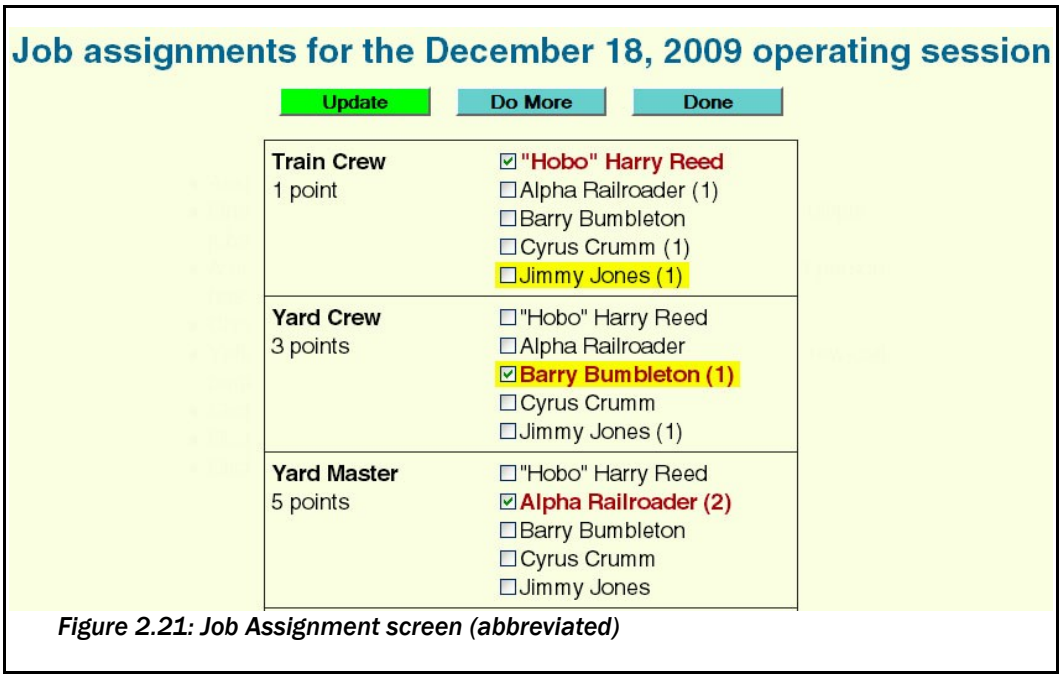


Figure 2.21: Job Assignment screen (abbreviated)

All crews who marked-up for the session are listed next to each job. You may assign jobs before the session is held, or afterward to record which crews actually worked the jobs.

Check the box to the left of a name to assign a job to that crew. One job may have multiple crews, and one crew may work multiple jobs. To reassign a job, uncheck one crew's box and check another one.

Checked **bold/red names** indicate prior job assignments for this session. This includes assignments you make on this screen; the name turns bold and red after you click **Update**.

Yellow-highlighted names indicate job preferences requested on the crew-call page. This makes it easy to see if your job assignments are reasonably close to crew preferences.

A number following a name shows the total number of times the person has worked that job. This includes jobs worked at completed sessions only, so if you assign jobs for upcoming sessions, those are not counted.

Click **Update** to save the job assignments. Click **Do More** to return to the first screen and select a different operating session. Click **Done** to return to the main Administration screen.

Is job's experience points are shown below the job title. It's best to define *every* job on the railroad, even those such as an extra train that ran once during a particular operating session. This allows you to assign crews to all jobs that were performed during a session, and consequently allows crews to accumulate experience points for those jobs.

If you run a special job during a session, use the Job Administration screen to create that job afterward, but omit it from the crew-call job-preference list. Then use this Job Assignment screen to record the crews who performed that job.

2.11 . Testing With real people

Now that you're familiar with Boomer Jack, this is a good time to ask some friends to help you test the system.

To begin, open *bj_flags.php* in a text editor, make the following changes, then upload the file to the Boomer Jack directory on your Web server.

- Verify that **$PUBLIC** is set to **true** . This will be the case if you've been testing Boomer Jack on your live Web site.
- Set **$SIMULATE_EMAIL** to **false** to tell Boomer Jack to send *real* e-mails instead of displaying simulated e-mails in the browser.
- Set **$TESTING** to **true** so the crew-call page displays a message telling people they are not signing up for actual operating sessions.

Now send an e-mail to your friends telling them what you're doing and asking them to try out the crew-call page (be sure to include the crew-call URL). Explain that you'll be testing the following:

- **Session mark-up.** Ask people to sign up for several sessions and choose a preferred job for some of them. Also ask people to mark-off one or two sessions, even if they're not signed-up for those sessions. Ask them to notify you of any strange behavior on the crew-call page.
- **Mark-up confirmation e-mail.** Explain that each person who marks-up should receive a confirming e-mail. Ask everyone to verify that this e-mail correctly confirms the sessions (dates) for which they marked-up and marked-off. You can verify that this e-mail was sent because it is CC to you as well as addressed to the crew.
- **Session cancellation and restoration.** After several people have marked-up for sessions, cancel one of them, and then restore it later (section 2.5). Explain that the people who have marked-up for this session will receive an e-mail notification of the cancellation and the subsequent restoration. Perform these operations and verify that the e-mails you and the crews receive are correct.
- **Complete sessions.** After several people have marked-up for sessions, choose one to mark " held." Tell the people who marked-up for this session that they will receive an e-mail thanking them for participating. Mark these crews as having attended the session, then mark the session " held" (section 2.5). Verify that the e-mail the you and the crews receive is correct.
- **Crew e-mail.** Compose and send an e-mail in Boomer Jack, as described in section 2.9 . When e-mail arrives in your in-box, verify that only your name appears in the TO address. All other crew names should be hidden in the BCC address (for privacy). Ask all recipients to reply to you, so you are sure they received the e-mail.

2.12 . Going live

After a successful test using real people, it's time to take Boomer Jack live. This is simple, since all the tests used your live Web site and database.

First you need to clear out the test data from the database. The simplest way to do this is to again run the *create_my_rr.sql* script on your Web-hosting service's MySQL administration page, as you did in section 1.2.3 .

Next, open *bj_flags.php* in a text editor, set **$TESTING** to **false** to remove the "testing" message from the crew-call page, then upload the file to the BJ directory on your Web server.

Create some real operating sessions as described in section 2.5 , and you're ready to go. Everyone who uses the crew-call page will be marking up for real sessions, and everything you do in the Boomer Jack main Administration screen is for real.

3 Integrating Boomer Jack with Your Web Site

3.1 . Overview

Boomer Jack's "public face" comprises the crew-call page and the ops session photos page, so you'll probably want to make these pages look like the rest of your Web site. This is easy to do, especially if you know enough about HTML to design your Web site in the first place.

Here is the the crew-call page integrated with my Virginian Railway Web site. Compare this to the "bare" version shown in Figure 2.4 in Chapter 2.

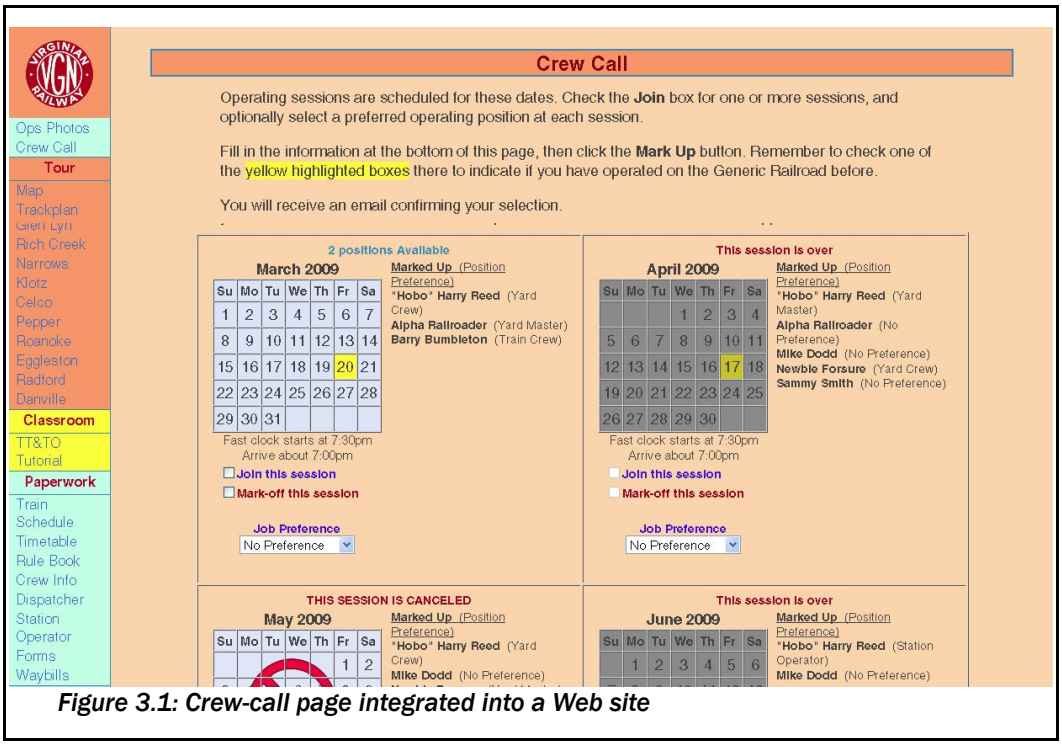


Figure 3.1: Crew-call page integrated into a Web site

The trick is to create an HTML file that contains your standard Web site styles and page headings. Boomer Jack reads this file, then appends its crew-call or photos information following your HTML.

Boomer Jack comes with a "template" file for you to copy and save as template files for the crew-call and photos pages. The next section explains how to do this.

Boomer Jack needs two template files, *bj_crew_call_template.php* for the crew-call page, and *bj_ops_photos_template.php* for the ops session photos page. If the template files are missing, these pages will still display, but will be "bare." Perform the following steps to create these two template files.

3.2. Discovering how Web-integration works

To get an idea how all this works,open the main Administration screen (Figure 2.1) in your Web browser and click the **Test Web Integration** button. You should see this screen:

HTML for Boomer Jack
Everything on this page down to the horizontal line is in the bj_test_template.php file, and is standard HTML. Everything below the horizontal line is generated by Boomer Jack. If you see text above and below the line, it proves that Boomer Jack is reading the template file and adding its code correctly.
You'll probably want to integrate Boomer Jack's crew-call page (bj_crew_call.php) and ops session photos page (bj_ops_photos.php) into your Web site. Here's what to do.
Make two copies of bj_test_template.php, one for the crew-call and the other for the session photos. Modify them with your regular Web site styles and HTML, including appropriate headings, then save the files with these names:
Crew-call: bj_crew_call_template.php
Session photos: bj_ops_photos_template.php
Please read the Boomer Jack User Manual for more information on integrating Boomer Jack with your Web site.
Boomer Jack for Generic Railroad – Web Site Integration
This table contains a list of operating positions from the database.
No Preference
Train Crew
Yard Crew
Yard Master
Station Operator
Dispatcher
Done

Figure 3.2:Web-integration test

This page is a composite of the HTML contained in the *bj_test_template.php* file and the PHP program code Boomer Jack read from the *bj_admin_test_Web.php* file. The two files work together in this way:

- *bj_test_template.php* is analogous to your regular HTML Web pages.
- *bj_admin_test_web.php* is analogous to the PHP files that Boomer Jack uses to create the crew-call and session photos pages, *bj_crew_call.php* and *bj_ops_photos.php.*

Open *bj_test_template.php* in a text editor. It contains this HTML text:

```
<!doctype html public "-//W3C//DTD HTML 4.01 Transitional//EN"
 "http://www.w3.org/TR/html4/loose.dtd">

<!-- Page heading - Substitute your own. -->
<div align="center">
<font size="+3">
<font color="blue"><strong>HTML for <font size="+4">B</font>oomer
<font size="+4">J</font>ack</strong>
</font>
</font>
</div>
<!-- End page heading -->

<!-- Page text - Substitute your own, if any is needed before Boomer Jack
content. -->
<p>
Everything on this page down to the horizontal line is in the
 <strong>bj_test_template.php</strong> file, and is standard HTML.
 Everything below the horizontal line is generated by Boomer Jack.
If you see text above <em>and</em> below the line,it proves that Boomer Jack
is reading the template file and adding its code correctly.
</p>
```

```
<p>
You'll probably want to integrate Boomer Jack's crew-call page
(<strong>bj_crew_call.php</strong>) and ops session photos page
(<strong>bj_ops_photos.php</strong>) into your Web site. Here's what to do.
</p>
<p>
Make two copies of <strong>bj_test_template.php</strong>, one for the crew-
call and the other for the session photos. Modify them with your regular Web
site styles and HTML, including appropriate headings, then save the files
with these names:
<ul>
<li> Crew-call: <strong>bj_crew_call_template.php</strong></li>
<li> Session photos: <strong>bj_ops_photos_template.php</strong></li>
</ul>
</p>
<p>
   Please read the Boomer Jack User Manual for more information on
integrating Boomer Jack with your Web site.
</p>
 <hr></hr>
<!-- End page text - Boomer Jack content follows -->
```

Figure 3.3: HTML for test page

Inspect this file carefully and you'll see the text and HTML tags that created the top portion of the page in Figure 3.2 . Notice the <HR></HR> tags highlighted at the bottom of the file. These create the horizontal line in the center of Figure 3.2 . If bj_test_template.php did not exist in the Boomer Jack directory on the Web server, the top part of the page would be missing, and only the lower portion in Figure 3.2 would display.

3.3. Creating the HTML template files

You can modify *bj_test_template.php* without fear of losing anything because Boomer Jack comes with a copy of the file named *orig_bj_test_template.php.* Make a few changes to this file using your Web site's standard styles or HTML, then upload it to your Web server. Once again open BJ's main Administration screen and click the **Test Web Integration** button. The page should display the changes you made in the top area, and the same job list and button in the bottom area. Play with this, possibly incorporating some of your Web site styles, until the Web page is to your liking and you understand what's going on.

Now save two copies of *bj_test_template.php* to your hard drive, one named *bj_crew_call_template.php* and the other named *bj_ops_photos_template.php.* Edit *bj_crew_call_template.php* to delete the test material and insert the styles, navigation links, and headings you want on your crew-call page above the calendars shown in Figure 2.4. Do the same thing with *bj_ops_photos_template.php,* inserting the styles, navigation links, and headings you want on your session photos page above the photos and captions.

Also remember to update your site's main navigation bar to include links to *bj_crew_call.php* for the crew-call page and *bj_ops_photos.php* for the ops session photos, so visitors can reach these pages from anywhere on your Web site.

After saving these files, upload them to your Web server with the rest of the Boomer Jack files. *Note: even though these files contain HTML code, they must end with* ***.php*** *. Do not change the extension to* ***.html*** *,thinking that "has to be" correct for HTML files. This name must end with* ***.php*** *or Boomer Jack won't read it.*

The easiest way to check out this customization is to open the crew-call page. You can do this by typing the crew call URL into your Web browser or by clicking the **Crew Call** button on the main Administration screen. You should see the same calendars and personal information fields as before (Figure 2.4 and Figure 2.5), but surrounded by your standard Web design.

To check out the session photos page, type its URL into your browser (or click the link on your Web site). Obviously you need to add some photos to operating sessions before you'll see anything on this page.

Here are examples of the ops session photos pages integrated into my Web site.

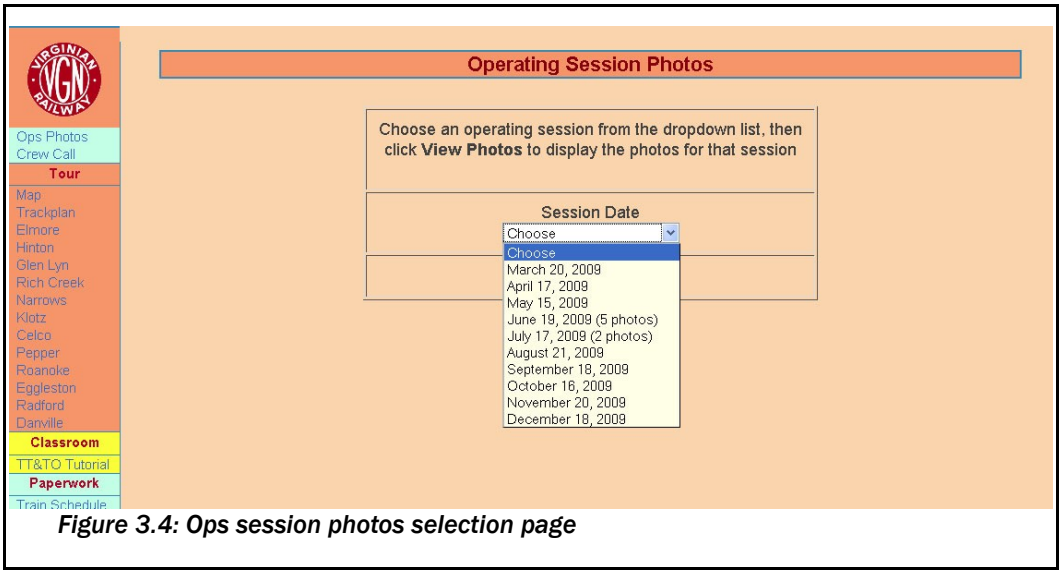


Figure 3.4: Ops session photos selection page

Figure 3.5: Ops session photos page

Notice that the captions and the display order are what were entered when adding the photos to this

operating session (Figure 2.13). Any display-order numbers that were entered ahead of the caption (#1, #2) on the Photo Admin page do not appear here.

The constant **$MY_OPS_PHOTOS_PER_ROW** in *bj_constants.php* tells Boomer Jack how many photos to put on each row. The default value is 1, but change it as desired. Be careful displaying more than two photos per row because the page can be quite wide if you have large photos. Not only will this cause the browser to display horizontal scroll bars, it also shoves the **Other Sessions** button out of sight to the right. It's best to display no more than two photos per row unless you first reduce them to 300 or 350 pixels wide.

4 Troubleshooting

Sometimes things go wrong. This section describes error messages you might see when testing Boomer Jack, and what to do about them. You're most likely to see these messages during the initial check-out of phase. It is *extremely* unlikely that you will see them during normal operation, since they indicate fundamental configuration problems, and it's impossible for Boomer Jack to run until the configuration is correct.

Problem	Solution
You see this message on your Web browser when you try to open a Boomer Jack page: *Can not select the my_rr database: Unknown database 'my_rr'*	The MySQL database name that Boomer Jack providing to your Web server does not match the name of the database on that server. Refer to step 1 in section 1.2.2 where you edited the *create_my_rr.sql* file and changed my_rr to the name you chose for your database. Also check step 2 and verify that the value you set for $**DATABASE** in *bj_user_info.php* matches this name. Finally, log into your Web-hosting service's MySQL administration screen as described in section 1.2.1, and double-check that the name of the database on the server is correct
You see this message on your Web browser when you try to open a Boomer Jack page: *Can not connect to database myAcct.myWebHost.com server: Can't connect to MySQL server on 'myAcct.myWebHost.com' (111)*	Your Web server can't find the MySQL database server that Boomer Jack is requesting. Refer to step 4 in section 1.2.3 where you set the value for $**HOST** in *bj_user_info.php.* Log into your Web-hosting service's MySQL administration screen and determine the correct host string to use, then assign it to $**HOST**. Alternatively, if you have a private local server, you might have set the value of **$PUBLIC** in *bj_flags.php* to **false**. Set it to **true** for live operation.
You see this message on your Web browser when you try to open a Boomer Jack page: *Can not connect to database server: Access denied for user 'myrruser'@mydomain.com' (using password: YES)*	The user name or password that boomer Jack is providing to log in to your my SQL database does not match the user name you created on your Web server. Refer to step 2 in section 1.2.2 where you set values for $**USER_NAME** and **$PASSWORD** in *bj_user_info.php.* Log into your Web-hosting service's MySQL administration screen as described in section 1.2.1 , and double-check that the user name you created in step 5 (e.g., bj_user) matches $**USER_NAME.** You probably won't be able to see the Boomer Jack user's password on the server, so you'll have to set

	a new one. Be sure to enter the same password exactly as you set for **$PASSWORD.** The password is case-sensitive, as is the user name and the database name.
You see this message on your Web browser when you try to open a Boomer Jack page: *Object not found! The requested URL was not found on this server. If you entered the URL manually please check your spelling and try again. If you think this is a server error, please contact the webmaster . Error 404*	Either you typed the Boomer Jack page URL incorrectly into your browser's address bar, or the PHP file truly doesn't exist on your Web server. Upload the Boomer Jack files again, and double-check the destination directory. If you placed the files in the same directory as your regular HTML files, the URL should consist of your standard Web site URL followed by a slash and the name of the Boomer Jack file (e.g., **http://myRR.myDomain.com/bj_admin.php.**
You see this message on your Web browser after performing a Boomer Jack operation: *Warning: main(bj_xxx.php) [function.main]: failed to open stream: No such file or directory in /home/xxx/bj_admin_email_crews.php on line 21*	Boomer Jack could not find one of the files it needs to read. Be sure all the BJ files are uploaded to your Web server. Typical files that Boomer Jack opens during most operations include: *bj_constants.php* *bj_flags.php* *bj_constants.php*
You see this message on your Web browser after performing a Boomer Jack operation: *Error performing query. [. . .] You have an error in your SQL syntax*	Oops! This indicates a programming error. Please copy the entire message from your Web browser and e-mail it to me at **mike@mdodd.com**, along with details about what you were doing when the error occurred. Also, are you absolutely sure you didn't inadvertently change something in *create_my_rr.sql*? This script creates the database tables, and changing even one character in the wrong place could name a column or table so it doesn't match Boomer Jack's code. If there's any possibility that something was changed, replace *create_my_rr.sql* with *orig_create_my_rr.sql*, make the changes described in section 1.2.2, and run the script again to create the database as you did in section 1.2.3.

5 Review

Hopefully by now you've used Boomer Jack enough to appreciate how it works. This chapter reviews the overall process flow.

- Define jobs on your railroad and optionally assign experience points to each.
- Create operating sessions. Boomer Jack can't do anything until sessions exist.
- Invite crews to mark-up for sessions. Each time someone marks-up, Boomer Jack adds the name to the database and sends a confirmation e-mail to that person.
- Print name tags for crews attending the next session.
- Assign crews to jobs, either before or after the session is held.
- Hold the operating session.
- Upload session photos to your Web site and add them to the session in Boomer Jack, so they appear on the session photos page.
- Mark the session "held" when it's over, and record which crews attended. Boomer Jack sends an e-mail to each person who participated, thanking them for coming and telling them where to view the photos.
- Use the Session Administration screen to cancel sessions if that becomes necessary, and to restore canceled sessions if the situation changes. Boomer Jack sends an e-mail to each person to marked-up for canceled or restored sessions.
- Use the Crew Administration screen to update names, e-mail addresses, and operating experience, and to see how many times each person has participated in your ops sessions.
- Use the Crew Administration screen to import crew data from other software, or export to other software.
- Send e-mail to one or more crews.

I hope Boomer Jack proves useful to you. Please drop me an e-mail with your comments and suggestions.